

10527062

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PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS	4	OCT 30	CHEMLIST enhanced with new search and display field
NEWS	5	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS	6	NOV 10	CA/CAPLUS F-Term thesaurus enhanced
NEWS	7	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS	8	NOV 20	CA/CAPLUS to MARPAT accession number crossover limit increased to 50,000
NEWS	9	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS	10	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS	11	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS	12	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS	13	DEC 18	CA/CAPLUS pre-1967 chemical substance index entries enhanced with preparation role
NEWS	14	DEC 18	CA/CAPLUS patent kind codes updated
NEWS	15	DEC 18	MARPAT to CA/CAPLUS accession number crossover limit increased to 50,000
NEWS	16	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS	17	DEC 27	CA/CAPLUS enhanced with more pre-1907 records
NEWS	18	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS	19	JAN 16	CA/CAPLUS Company Name Thesaurus enhanced and reloaded
NEWS	20	JAN 16	IPC version 2007.01 thesaurus available on STN
NEWS	21	JAN 16	WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS	22	JAN 22	CA/CAPLUS updated with revised CAS roles
NEWS	23	JAN 22	CA/CAPLUS enhanced with patent applications from India
NEWS	24	JAN 29	PHAR reloaded with new search and display fields
NEWS	25	JAN 29	CAS Registry Number crossover limit increased to 300,000 in multiple databases

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
NEWS X25	X.25 communication option no longer available

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 08:16:30 ON 09 FEB 2007

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 08:16:41 ON 09 FEB 2007

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STRUCTURE FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

DICTIONARY FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

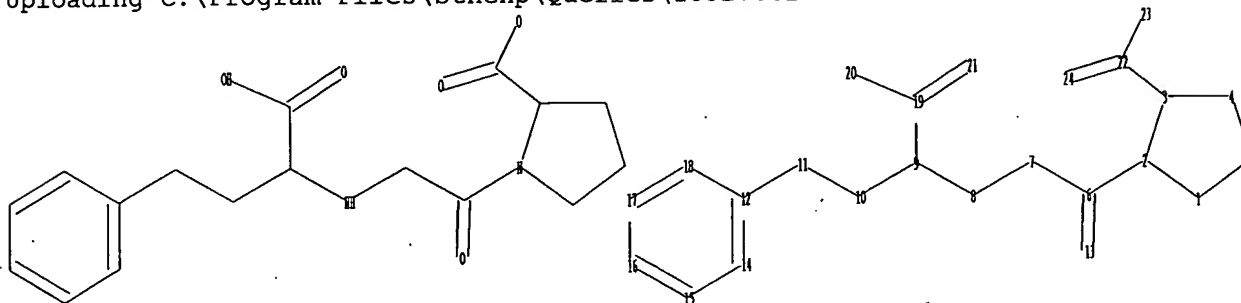
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10527062.str



chain nodes :

6 7 8 9 10 11 13 19 20 21 22 23 24

ring nodes :

1 2 3 4 5 12 14 15 16 17 18

10527062

chain bonds :
2-6 3-22 6-7 6-13 7-8 8-9 9-10 9-19 10-11 11-12 19-20 19-21 22-23
22-24
ring bonds :
1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18
exact/norm bonds :
1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24
exact bonds :
1-5 3-4 3-22 4-5 6-7 9-10 9-19 10-11 11-12
normalized bonds :
12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21
isolated ring systems :
containing 1 : 12.:

Match level :

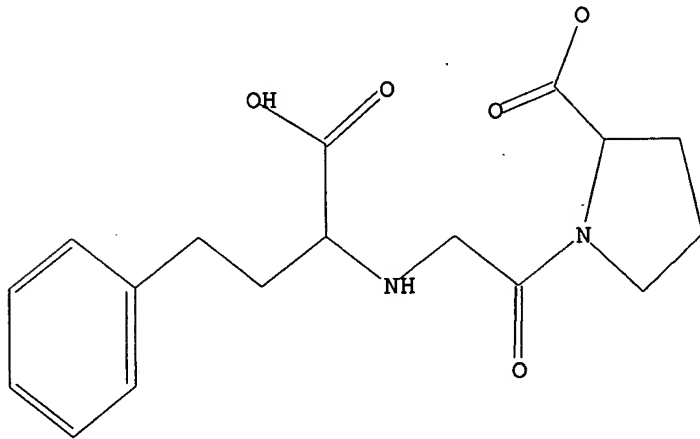
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10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 08:17:02 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 142 TO ITERATE

100.0% PROCESSED 142 ITERATIONS
SEARCH TIME: 00.00.01

14 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 2126 TO 3554
PROJECTED ANSWERS: 56 TO 504

10527062

L2 14 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 08:17:06 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2944 TO ITERATE

100.0% PROCESSED 2944 ITERATIONS 311 ANSWERS
SEARCH TIME: 00.00.01

L3 311 SEA SSS FUL L1

=> fil hcaplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	172.10	172.31

FILE 'HCAPLUS' ENTERED AT 08:17:11 ON 09 FEB 2007
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FILE COVERS 1907 - 9 Feb 2007 VOL 146 ISS 8
FILE LAST UPDATED: 8 Feb 2007 (20070208/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 2253 L3

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	5.20	177.51

FILE 'REGISTRY' ENTERED AT 08:18:20 ON 09 FEB 2007
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STRUCTURE FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0
DICTIONARY FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

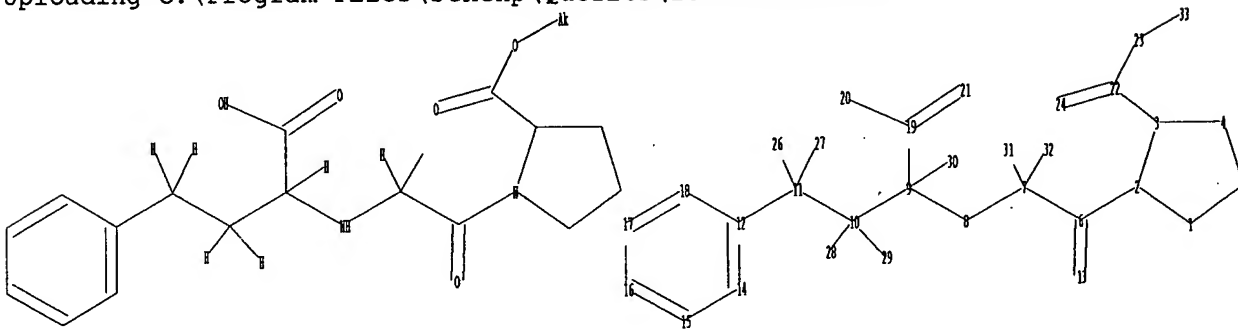
Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10527062s1.str



chain nodes :

6 7 8 9 10 11 13 19 20 21 22 23 24 26 27 28 29 30 31 32 33

ring nodes :

1 2 3 4 5 12 14 15 16 17 18

chain bonds :

2-6 3-22 6-7 6-13 7-8 7-31 7-32 8-9 9-10 9-19 9-30 10-11 10-28 10-29
11-12 11-26 11-27 19-20 19-21 22-23 22-24 23-33

ring bonds :

1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18

exact/norm bonds :

1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24 23-33

exact bonds :

1-5 3-4 3-22 4-5 6-7 7-31 7-32 9-10 9-19 9-30 10-11 10-28 10-29 11-12
11-26 11-27

normalized bonds :

12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21

isolated ring systems :

containing 1 : 12 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 26:CLASS 27:CLASS
28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:CLASS

L5

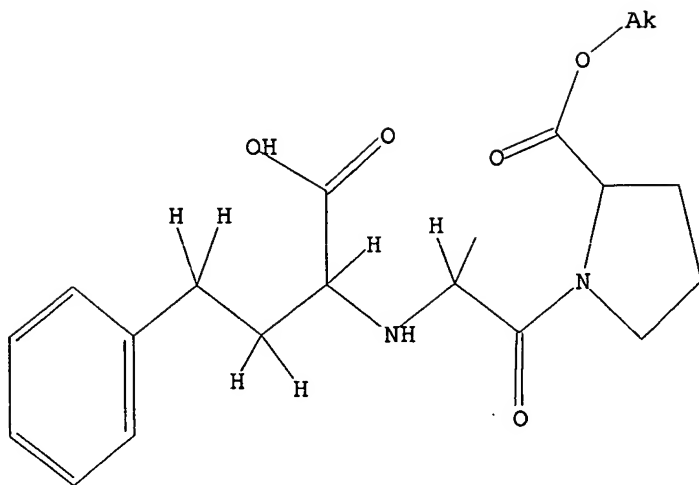
STRUCTURE UPLOADED

10527062

=> d 15

L5 HAS NO ANSWERS

L5 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 15

SAMPLE SEARCH INITIATED 08:19:56 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 142 TO ITERATE

100.0% PROCESSED 142 ITERATIONS
SEARCH TIME: 00.00.01

1 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 2126 TO 3554
PROJECTED ANSWERS: 1 TO 80

L6 1 SEA SSS SAM L5

=> s 15 full

FULL SEARCH INITIATED 08:20:00 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 2944 TO ITERATE

100.0% PROCESSED 2944 ITERATIONS
SEARCH TIME: 00.00.01

37 ANSWERS

L7 37 SEA SSS FUL L5

=> fil hcaplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
173.00	350.51

FULL ESTIMATED COST

FILE 'HCAPLUS' ENTERED AT 08:20:09 ON 09 FEB 2007
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FILE COVERS 1907 - 9 Feb 2007 VOL 146 ISS 8
FILE LAST UPDATED: 8 Feb 2007 (20070208/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 17

L8 10 L7

=> d ibib ed abs hitstr 1-10

10527062

L8 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS ON STN
 ACCESSION NUMBER: 2006:1124123 HCAPLUS
 DOCUMENT NUMBER: 145:455276
 TITLE: Preparation of amino acid derivatives with high therapeutic index
 INVENTOR(S): Chandran, V. Ravi
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 139pp.
 CODEN: USXKCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006241017	A1	20061026	US 2006-343557	20060130
WO 2005046575	A2	20050526	WO 2004-US24901	20040729
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BV, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2006287244	A1	20061221	US 2006-442027	20060526
PRIORITY APPL. INFO.:			US 2003-491331P	P 20030729
			WO 2004-US24901	A2 20040729
			US 2006-343557	A2 20060130

ED Entered STN: 27 Oct 2006

AB The invention is directed to novel therapeutic compds. comprised of an amino acid bonded to a medicament or drug having a hydroxy, amino, carboxy or acylating function. These high-therapeutic index derivs. have the same utility as the drug from which they are made and they have enhanced pharmacol. and pharmaceutical properties. The examples describe the synthesis and activities of amino acid derivs. of propofol, ibuprofen, ketoprofen, ketorolac, aspirin, acetaminophen, cyclosporin A, valproic acid, clopidogrel, danazol, benazepril, enalapril, and fenofibric acid. Thus, (1)-ibuprofen esters of L-serine, L-threonine, and L-hydroxyproline were prepared and examined for analgesic, gastric mucosal irritation, toxicity, and pharmacokinetic properties.

IT 674796-29-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of amino acid derivs. with high therapeutic index)

RN 674796-29-3 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS ON STN
 ACCESSION NUMBER: 2005:99521 HCAPLUS
 DOCUMENT NUMBER: 142:156329
 TITLE: Preparation of α -amino acid benzothiazolythio esters as intermediates for manufacture of ACE inhibitors
 INVENTOR(S): Singh, Girij Pal; Godbole, Himanshu Madhav; Mahajan, Pravin Raghunath; Nehate, Sagar Purushottam
 PATENT ASSIGNEE(S): Lupin Limited, India
 SOURCE: PCT Int. Appl., 108 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005010028	A1	20050203	WO 2003-IN257	20030731
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003272077	A1	20050214	AU 2003-272077	20030731
PRIORITY APPL. INFO.:			WO 2003-IN257	A 20030731
			CASREACT 142:156329; MARPAT 142:156329	

OTHER SOURCE(S):
 ED Entered STN: 04 Feb 2005

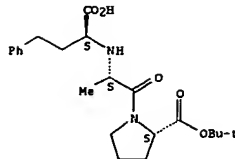
AB The invention relates to esters (S,S)-RCH₂CH₂CH(CO₂R₁)NHC(=S)CO₂X (I; R is alkyl or Ph; R₁ H or alkyl; R₂ is alkyl or aminoalkyl; X is 2-benzothiazolythio) which are intermediates in the manufacture of ACE inhibitors I (X is an amino acid or derivative). The intermediate benzothiazolythio esters were prepared by reaction of the appropriate acid or acid chloride with 2,2'-dithiobis(benzthiazole) or 2-mercaptobenzthiazole. Thus, treatment of N-[1(S)-(ethoxycarbonyl)-3-phenylpropyl]-N6-(trifluoroacetyl)-L-lysine (preparation given) with 2,2'-dithiobis(benzthiazole), followed by coupling with L-proline Et ester and deprotection, afforded lisinopril dihydrate.

IT 827622-34-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of α -amino acid benzothiazolythio esters as intermediates for manufacture of ACE inhibitors)

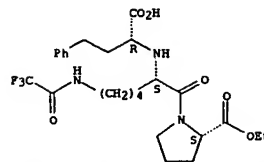
RN 827622-34-4 HCAPLUS
 CN L-Proline, N2-[(1R)-1-carboxy-3-phenylpropyl]-N6-(trifluoroacetyl)-L-lysyl-, 2-ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS ON STN (Continued)



L8 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS ON STN (Continued)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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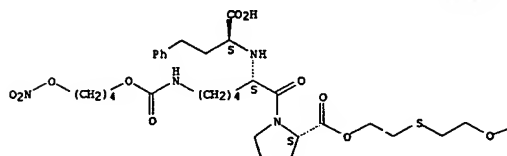
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS ON STN (Continued)
 ACCESSION NUMBER: 2004:1124626 HCAPLUS
 DOCUMENT NUMBER: 142:79913
 TITLE: Enalapril-nitroxy derivatives and related compounds as
 ace inhibitors for the treatment of cardiovascular
 diseases
 INVENTOR(S): Almirante, Nicoletta; Ongini, Ennio; Del Soldato,
 Piero
 PATENT ASSIGNEE(S): Nicox S. A., Fr.
 SOURCE: PCT Int. Appl., 132 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004110432	A1	20041223	WO 2004-EP51089	20040611
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LX, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TH, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BV, GH, GN, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TH, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004246821	A1	20041223	AU 2004-246821	20040611
CA 2529478	A1	20041223	CA 2004-2529478	20040611
EP 1635816	A1	20060322	EP 2004-741779	20040611
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, ES, HU, PL, SK				
BR 2004011430	A	20060725	BR 2004-11430	20040611
CN 1909345	A	20060726	CN 2004-80017127	20040611
US 2005004100	A1	20050106	US 2004-869038	20040617
NO 2006000268	A	20060315	NO 2006-268	20060118
PRIORITY APPL. INFO.:			EP 2003-101796	A 20030619
			WO 2004-EP51089	W 20040611

OTHER SOURCE(S): MARPAT 142:79913
 ED Entered STM: 23 Dec 2004
 AB Disclosure is compds. with a general formula of A-(X1-ON02)S, wherein A is a known ACE-inhibitor such as enalapril and X1 is a spacer such as a (C1-C6)-alkylene. The compds. can be used as ACE-inhibitors for the treatment of cardiovascular and renal diseases and inflammatory processes. The compds. have an improved pharmacol. activity when compared with the structurally closest related prior art compound. For example, synthesized N-[(1S)-1-ethoxycarbonyl-3-phenylpropyl]-L-alanyl-L-proline 3-nitroxypropyl ester hydrogen maleate was found to have good vasorelaxation property.
 IT 811787-07-2 811787-09-4 811787-11-8
 811787-13-0 811787-15-2 811787-17-4
 811787-19-6 811787-21-0 811787-23-2
 811787-25-4 811787-27-6 811787-29-8
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L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS ON STN (Continued)

PAGE 1-A



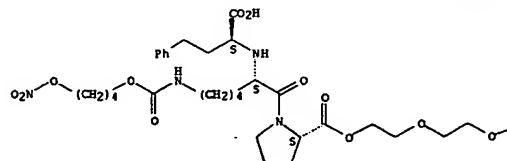
PAGE 1-B

—NO2

RN 811787-13-0 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

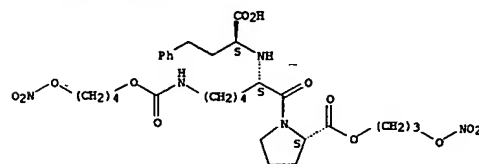
Absolute stereochemistry.

PAGE 1-A



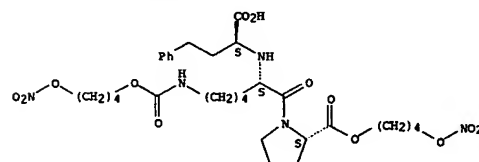
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS ON STN (Continued)
 811787-38-9 811787-39-0
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (enalapril-nitroxy derivs. and related compd. as ACE inhibitors for the treatment of cardiovascular and renal diseases)
 RN 811787-07-2 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-09-4 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-11-8 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethyl]thio]ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

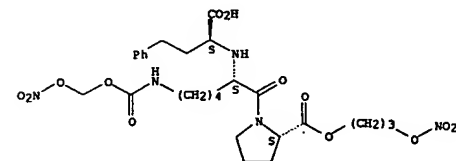
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS ON STN (Continued)

PAGE 1-B

—NO2

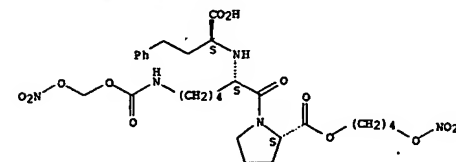
RN 811787-15-2 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-17-4 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

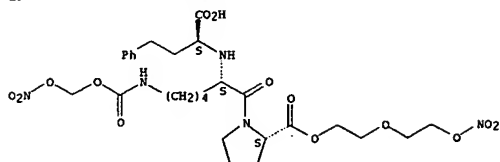


RN 811787-19-6 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

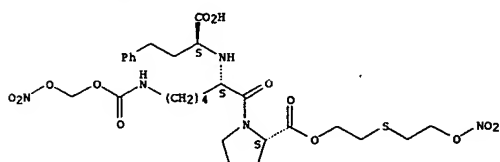
10527062

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



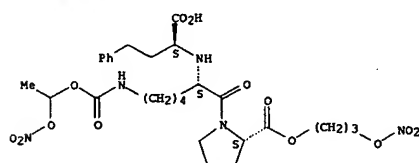
RN 811787-21-0 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-23-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

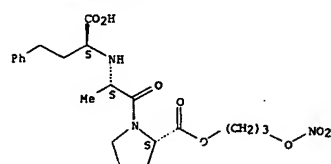


RN 811787-25-4 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI)

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

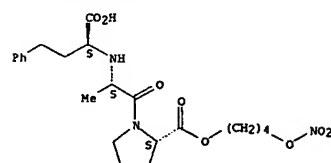
RN 811787-31-2 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



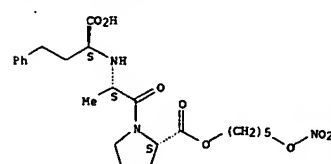
RN 811787-33-4 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-35-6 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[5-(nitrooxy)pentyl] ester (9CI) (CA INDEX NAME)

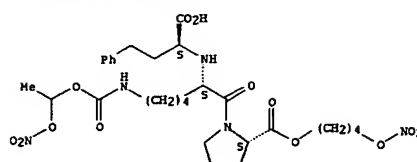
Absolute stereochemistry.



RN 811787-38-9 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[6-(nitrooxy)hexyl] ester (9CI) (CA INDEX NAME)

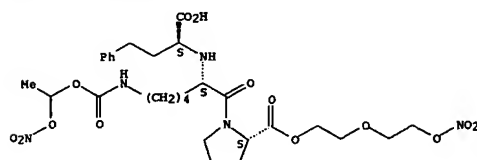
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Absolute stereochemistry.



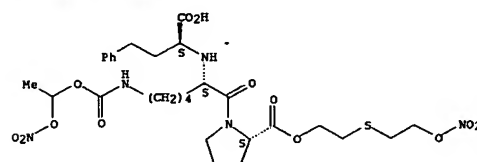
RN 811787-27-6 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



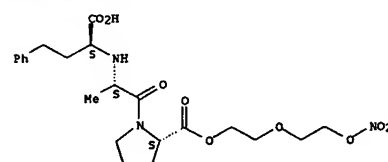
RN 811787-29-8 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



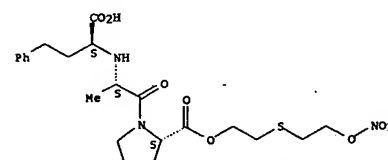
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Absolute stereochemistry.



RN 811787-39-0 HCAPLUS
CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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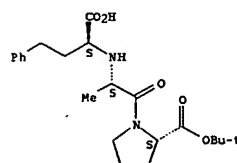
L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCSSION NUMBER: 2004:252532 HCAPLUS
 DOCUMENT NUMBER: 140:276202
 TITLE: Proline esters and preparations containing the same
 for percutaneous administration
 INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiro; Minowa,
 Takayuki; Komine, Miho; Kimura, Kunihiro
 PATENT ASSIGNEE(S): Toaeiyo Ltd., Japan
 SOURCE: PCT Int. Appl., 38 pp.
 CODEN: PIXX02
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W: AU, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TH, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2498757	A1	20040325	CA 2003-2498757	20030908
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, HK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 200528232	A1	20051229	US 2005-527062	20050309
PRIORITY APPLN. INFO.:			JP 2002-265276	A 20020911
			WO 2003-JP11420	W 20030908

OTHER SOURCE(S): MARPAT 140:276202
 ED Entered STN: 26 Mar 2004
 AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing
 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pr myristate,
 IT 674796-29-3P, 1-[N-[(1S)-1-Carboxy-3-phenylpropyl]-L-alanyl]-L-proline tert-butyl ester
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

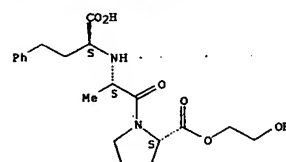
L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 (Reactant or reagent)
 (prepn. of proline esters as prodrugs for enalaprilat for percutaneous administration)
 RN 674796-29-3 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 674285-96-2P 674285-97-3P 674285-98-4P
 674285-99-5P 674286-00-1P
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of proline esters as prodrugs for enalaprilat for percutaneous administration)
 RN 674285-96-2 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

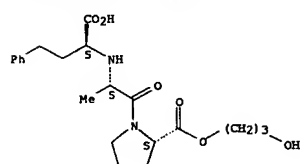
Absolute stereochemistry.



RN 674285-97-3 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(3-hydroxypropyl) ester (9CI) (CA INDEX NAME)

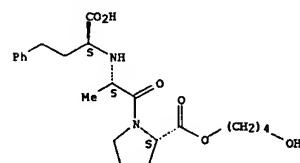
Absolute stereochemistry.

L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



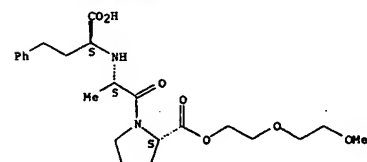
RN 674285-98-4 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674285-99-5 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-(2-methoxyethoxy)ethyl) ester (9CI) (CA INDEX NAME)

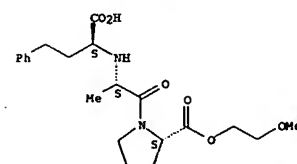
Absolute stereochemistry.



RN 674286-00-1 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

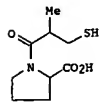
L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1994:630627 HCAPLUS
 DOCUMENT NUMBER: 121:230627
 TITLE: Design, synthesis and enzyme inhibitory activities of new trifluoromethyl-containing inhibitors for angiotensin converting enzyme
 AUTHOR(S): Ojima, Iwao; Jameison, Fabian A.; Pete, Bela; Radunz, Hans; Schittenhelm, Christine; Lindner, Hans J.; Emith, Arturo E.
 CORPORATE SOURCE: Dep. Chem., State Univ. New York, Stony Brook, NY, 11794-3400, USA
 SOURCE: Drug Design and Discovery (1994), 11(2), 91-113
 CODEN: DDDIEV; ISSN: 1055-9612
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 12 Nov 1994
 GI

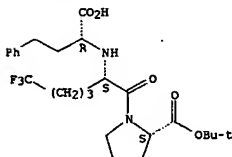


AB Trifluoromethyl-containing analogs of captopril (I) as well as analogs and homologs of enalaprilat were prepared and evaluated for inhibition of angiotensin converting system (ACE). Direct substitution of trifluoromethyl for Me produced a very potent captopril analog with an IC50 of 3 + 10-10 M in vitro. Hydrophobicity and conformational effects of trifluoromethyl group are among the reasons accounting for this activity. Structure-activity relation is studied based on mol. mechanics calcns. using a II-SCF-mol. mechanics program (PIIM) as well as SYBYL mol. mechanics program. Simultaneous incorporation of trifluoromethyl and an indoline residue unexpectedly yielded a less potent captopril analog (IC50 = 8 + 10-8 M). Enalaprilat analogs derived from replacement of the alanine residue with trifluoronorvaline and trifluoronorleucine residues gave moderately potent compds. (IC50 = 2-6 + 10-8 M). The structure-activity relation for these fluoroenalaprilat analogs is discussed in comparison with known analogs.

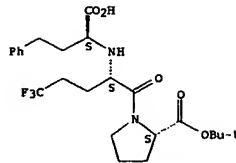
IT 158140-42-2P 158140-43-3P 158249-81-1P
 158249-82-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, as intermediate for captopril or enalaprilat analog)
 RN 158140-42-2 HCAPLUS
 CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-5,5,5-trifluoro-L-norvalyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 Absolute stereochemistry.

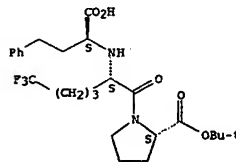


L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



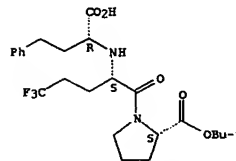
RN 158140-43-3 HCAPLUS
 CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-6,6,6-trifluoro-L-norleucyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



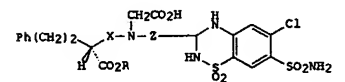
RN 158249-81-1 HCAPLUS
 CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-5,5,5-trifluoro-L-norvalyl]-, 2-(1,1-dimethylethyl) ester, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 158249-82-2 HCAPLUS
 CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-6,6,6-trifluoro-L-norleucyl]-, 2-(1,1-dimethylethyl) ester, (R)- (9CI) (CA INDEX NAME)

L8 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:235824 HCAPLUS
 DOCUMENT NUMBER: 112:235824
 TITLE: Angiotensin converting enzyme inhibitors. 9. Novel [[N-(1-carboxyl-3-phenylpropyl)amino]acyl]glycine derivatives with diuretic activity
 AUTHOR(S): Barton, Jeffrey N.; Piwinski, John J.; Skiles, Jerry V.; Regan, John R.; Henard, Paul R.; Desai, Rohit; Golec, F. S.; Reilly, Laurence W.; Goetzen, Thomas; et al.
 CORPORATE SOURCE: Rorer Cent. Res., Horsham, PA, 19044, USA
 SOURCE: Journal of Medicinal Chemistry (1990), 33(6), 1600-6
 CODEN: JMCMBR; ISSN: 0022-2623
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 112:235824
 ED Entered STN: 23 Jun 1990
 GI



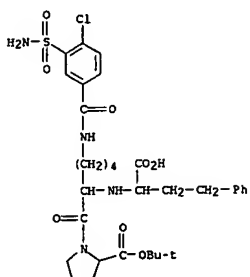
AB A series of mols. having sulfonamide diuretic moieties covalently linked to non-sulphydryl angiotensin converting enzyme (ACE) inhibitors, e.g. I [R = Et, X = Ala, Z = NMeCH2, (S)-CH(CH2CHMe2); R = H, X = Ala, Lys, Lys(CO2CH2Ph), Z = CH2; R = H, X = Ala, Z = (CH2)3, (S)-CBMe], were prepared and tested for both activities. 150 values for ACE inhibition as low as 7 nM were observed. Discernable diuretic activity was seen for several hydrochlorothiazide-based mols. Effects of the ACE inhibitory and diuretic structures on the resp. potencies are discussed.

IT 126849-86-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and deblocking of, with hydrogen chloride)

RN 126849-86-3 HCAPLUS
 CN L-Proline, 1-[N6-[3-(aminosulfonyl)-4-chlorobenzoyl]-N2-(1-carboxy-3-phenylpropyl)-L-lysyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

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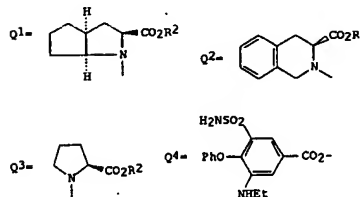
L8 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L8 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:458356 HCAPLUS
 DOCUMENT NUMBER: 111:58356
 TITLE: Preparation of N-(1-carboxy-3-phenylpropyl)alanine derivatives as diuretics and antihypertensives
 INVENTOR(S): Bretting, Claus Aage Svendsgaard; Bruun, Herta; Feit, Peter Werner; Godtfredsen, Wagn Ole
 PATENT ASSIGNEE(S): Leo Pharmaceutical Products Ltd. A/S, Den.
 SOURCE: Brit. UK Pat. Appl., 35 pp.
 CODEN: BA0XDU
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

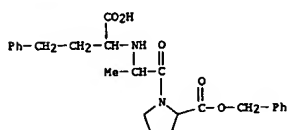
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2207129	A	19890125	GB 1987-16466	19870713
PRIORITY APPLN. INFO.:				
ED Entered STN: 20 Aug 1989				
GI				



AB (S,S)-PhCH2CH2CH(CO2R1)NHCHMeCOR [I; R = azole and azine groups Q1-Q3, R4CH2CO2H; 2l of R1,R2 = R5CO2Z and the other may be H, alkyl, aralkyl; R4 = 2-indanyl; R5 = residue of a compound with diuretic and/or saluretic activity; Z = CHR3, CH2CH(OH)CH2, CH2CH6:CHCH2; R3 = H, alkyl, aralkyl; R6R7 = CO2Z] were prepared as diuretics and antihypertensives (no data). To 3-ethylamino-4-phenoxy-5-sulfamoylbenzoic acid in CH2Cl2 containing NaHCO3 and Bu4NHSO4 in H2O was added ClSO3CH2Cl in CH2Cl2 and stirring was continued 15 min to give the chloromethyl ester Q4CH2Cl which was stirred 6 days with Q3OCOCH2Ph (R2 = K) to give Q3OCOCH2Ph (R2 = CH2Q4). The latter was hydrogenolized to Q3H (R2 = CH2Q4) which was stirred 5 h with I (R = R1 = H) in DMF containing hydroxybenzotriazole and DCC to give I (R = Q3, R1 = H, R2 = CH2Q4).
 IT 85918-74-7

L8 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

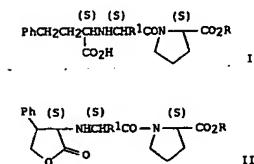
RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in prepn. of diuretics and antihypertensives)
 RN 85918-74-7 HCAPLUS
 CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



L8 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:213348 HCAPLUS
 DOCUMENT NUMBER: 110:213348
 TITLE: Preparation of alanylproline derivatives usable in the drug industry
 INVENTOR(S): Fodor, Tamas; Fischer, Janos; Stefko, Bela; Dobay, Laszlo
 PATENT ASSIGNEE(S): Richter, Gedeon, Vegyeszeti Gyar Rt., Hung.
 SOURCE: Hung. Teljes, 16 pp.
 CODEN: HUXXBU
 DOCUMENT TYPE: Patent
 LANGUAGE: Hungarian
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HU 44578	A2	19880328	HU 1986-2688	19860627
HU 196834	B	19890130		
PRIORITY APPLN. INFO.:				
OTHER SOURCE(S): MARPAT 110:213348				
ED Entered STN: 10 Jun 1989				
GI				

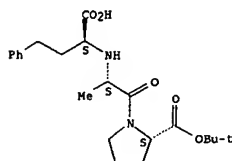


AB Title compds. (I; R = H, protective group; R1 = alkyl, alkylamino) are prepared by reduction of the dihydrofuranone derivs. II.
 N-[5(R)-Phenylidihydro-2(3H)furanon-3(S)-yl]-[5]-alanyl-(S)-proline benzyl ester-HCl (preparation given) was hydrogenated in MeOH, over Pd/charcoal, to give N-[1(S)-carboxy-3-phenylpropyl]-[5]-alanyl-(S)-proline.
 IT 120439-27-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 120439-27-2 HCAPLUS
 CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(1,1-dimethylethyl) ester, monohydrochloride, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

10527062

L8 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



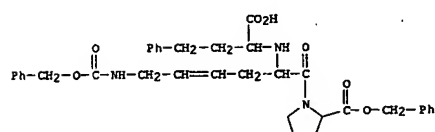
● HCl

L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1985:471710 HCAPLUS
 DOCUMENT NUMBER: 103:71710
 TITLE: N-Carboxymethyl(unsaturated) lysyl and α-(ε-aminoalkyl)glycyl amino acid antihypertensive agents
 INVENTOR(S): Patchett, Arthur A.; Wu, Mu T.
 PATENT ASSIGNEE(S): Merck and Co., Inc., USA
 SOURCE: S. African, 64 pp.
 CODEN: SFOKAB
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

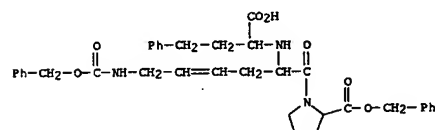
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 8302509	A	19841128	ZA 1983-2509	19830411
US 1982-367199	A	19820412		

PRIORITY APPLN. INFO.:
 ED Entered STN: 07 Sep 1985
 AB Title compds. R1CH(CO2R)NHCH2CON((CH2)nR3)CH2CO2R (R = H, alkyl, aralkyl, aryl; R1 = H, C1-12 alkyl, cyclic alkyl, unsatd. alkyl, substituted alkyl, (un)substituted aryl or heteroaryl, etc.; R2 = (CH2)pX(CH2)qNHR5 (X = CH2CH or C.tplbond.C; R5 = H, alkyl, aralkyl, acyl; p = 0-3; q = 1, 2); R3 = alkyl, benzofused cycloalkyl or bicycloalkyl, (un)substituted aryl or heteroaryl, substituted alkyl; R4 = H, alkyl; R3 and R4 may be joined with carbon atoms to form a ring; n = 0-4) were prepared as antihypertensives (no data) due to their ability to inhibit angiotensin-converting enzyme. Thus, trans-H2NCH2CH:CHCH2CH(NH2)CO2H was treated with N-benzoyloxycarbonyl-5-norbornene-2,3-dicarboximide in H2O and 0.5M methanolic KOH to give 39% trans-ZNHCCH2CH:CHCH2CH(NH2)CO2H (Z = PhCH2CO2C), which was treated with (Boc)2O (Boc = Me3CO2C) in 1M NaOH/Me3COH to give 98% trans-ZNHCCH2CH:CHCH2CH(NHBoc)CO2H. The latter was coupled with H-L-Pro-OCH2Ph.HCl by DCC in CH2Cl2 containing Et3N to give trans-ZNHCCH2CH:CHCH2CH(NHBoc)CO-L-Pro-OCH2Ph (I), which was isolated as isomer A and B. I isomer A was Boc-deblocked by CF3CO2H and then treated with PhCH2CH2CO2H to give 98% trans-ZNHCCH2CH:CHCH2CH(NHBoc)CO2H. The latter was coupled with H-L-Pro-OCH2Ph.HCl by DCC in CH2Cl2 containing Et3N to give trans-ZNHCCH2CH:CHCH2CH(NHBoc)CO-L-Pro-OCH2Ph (II) (R6 = 2, R7 = CH2Ph), which was deblocked by HBr/HOAc to give 62% II (R6 = R7 = H).
 IT 97589-99-6P.97590-00-6P.97590-04-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and deblocking of)
 RN 97589-99-6 HCAPLUS
 CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-dihydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (R)- (9CI) (CA INDEX NAME)

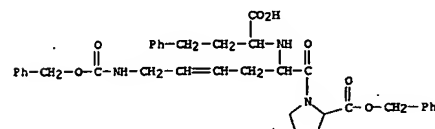
L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 97590-00-6 HCAPLUS
 CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-dihydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)

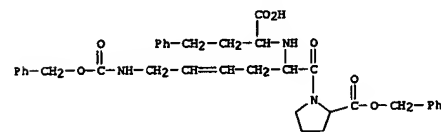


RN 97590-04-0 HCAPLUS
 CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(Z)-4,5-dihydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (R)- (9CI) (CA INDEX NAME)



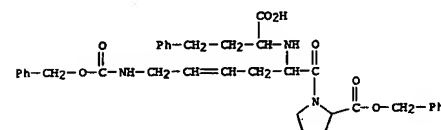
IT 97531-72-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reductive alkylation of, with oxophenylbutanoic acid)
 RN 97531-72-1 HCAPLUS
 CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-dihydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester (9CI) (CA INDEX NAME)

L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



IT 97590-05-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 97590-05-1 HCAPLUS
 CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(Z)-4,5-dihydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



10527062

L8 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1983:488574 HCAPLUS
DOCUMENT NUMBER: 99:88574
TITLE: Amino acid derivatives as antihypertensives
INVENTOR(S): Harris, Elbert E.; Patchett, Arthur A.; Tristram, Edward W.; Wyvratt, Matthew J.
PATENT ASSIGNEE(S): Merck and Co., Inc., USA
SOURCE: U.S., 33 pp. Cont.-in-part of U.S. Ser. No. 79,898, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4374829	A	19830222	US 1981-235335	19810217
CS 237325	B2	19850716	CS 1982-1339	19820226
CS 237326	B2	19850716	CS 1982-1340	19820226
CS 237327	B2	19850716	CS 1982-1341	19820226
CS 237328	B2	19850716	CS 1982-1342	19820226
US 4472380	A	19840918	US 1982-423916	19820927
CA 1275349	C2	19901016	CA 1986-518334	19860916
CA 1300313	C2	19920505	CA 1986-518335	19860916
CA 1262684	A2	19891107	CA 1988-576715	19880907
CA 1276559	C2	19901120	CA 1988-576716	19880907
CA 1275350	C2	19901016	CA 1989-607198	19890801

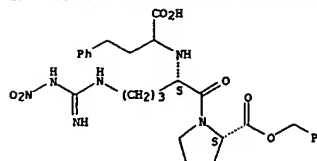
PRIORITY APPL. INFO.:

OTHER SOURCE(S): CASREACT 99:88574

ED Entered STN: 12 May 1984
AB R00C0R1:2NHCH2CONR4CR5R7COR6 [R,R6 = OH, alkoxyl, alkenoxyl, dialkylaminoalkoxyl, acylaminoalkoxyl, acyloxyalkoxyl, (un)substituted arylalkoxyl or acalkoxyl, NH2, alkylamino, dialkylamino, arylalkylamino, NHOH; R1 = H, C1-20 alkyl, substituted alkyl or Ph, (un)substituted aralkyl, heteroaralkyl, aralkenyl or heteroaralkenyl; R2, R7 = H, alkyl; R3 = H, (un)substituted alkyl or phenylalkyl; R4 = H alkyl; R5 = (un)substituted alkyl, Ph, phenylalkyl, hydroxyphenylalkyl; NR4CR5 = (un)substituted ring] were prepared as antihypertensives and angiotensin-converting enzyme inhibitors (no data). Thus, H-L-Ala-L-Pro-OH was condensed with PhCH2COCOOH in the presence of NaBH3CN to give diastereomeric PhCH2CH(COOH)-L-Ala-L-Pro-OH.
IT 85918-69-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrogenolysis of)
RN 85918-69-0 HCAPLUS
CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-N5-[imino(nitroamino)methyl]-L-ornithyl]-, 2-(phenylmethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

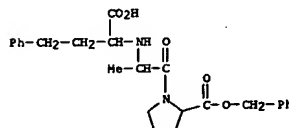


IT 85918-74-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 85918-74-7 HCAPLUS

CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(phenylmethyl) ester, (S)-(9CI) (CA INDEX NAME)



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=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
57.90	408.41

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-7.80	-7.80

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NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS	4	OCT 30	CHEMLIST enhanced with new search and display field
NEWS	5	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS	6	NOV 10	CA/CAPLUS F-Term thesaurus enhanced
NEWS	7	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS	8	NOV 20	CA/CAPLUS to MARPAT accession number crossover limit increased to 50,000
NEWS	9	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS	10	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS	11	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS	12	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS	13	DEC 18	CA/CAPLUS pre-1967 chemical substance index entries enhanced with preparation role
NEWS	14	DEC 18	CA/CAPLUS patent kind codes updated
NEWS	15	DEC 18	MARPAT to CA/CAPLUS accession number crossover limit increased to 50,000
NEWS	16	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS	17	DEC 27	CA/CAPLUS enhanced with more pre-1907 records
NEWS	18	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS	19	JAN 16	CA/CAPLUS Company Name Thesaurus enhanced and reloaded
NEWS	20	JAN 16	IPC version 2007.01 thesaurus available on STN
NEWS	21	JAN 16	WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS	22	JAN 22	CA/CAPLUS updated with revised CAS roles
NEWS	23	JAN 22	CA/CAPLUS enhanced with patent applications from India

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NEWS 24 JAN 29 PHAR reloaded with new search and display fields
NEWS 25 JAN 29 CAS Registry Number crossover limit increased to 300,000 in
multiple databases
NEWS 26 FEB 13 CASREACT coverage to be extended
NEWS 27 Feb 15 PATDPASPC enhanced with Drug Approval numbers
NEWS 28 Feb 15 RUSSIAPAT enhanced with pre-1994 records
NEWS 29 Feb 23 KOREAPAT enhanced with IPC 8 features and functionality

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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FILE 'HOME' ENTERED AT 16:11:54 ON 23 FEB 2007

=> fil reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 16:12:10 ON 23 FEB 2007
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DICTIONARY FILE UPDATES: 22 FEB 2007 HIGHEST RN 922800-14-4

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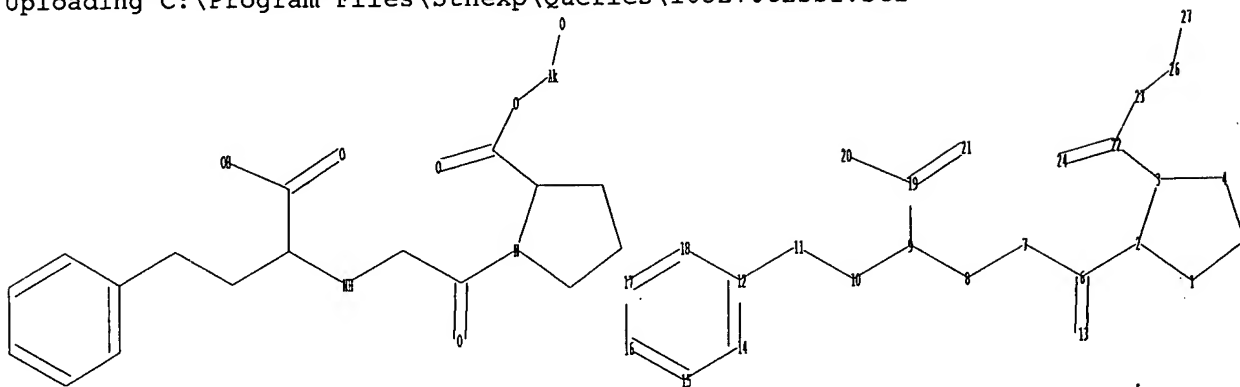
REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

10527062

<http://www.cas.org/ONLINE/UG/regprops.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10527062ssl.str



chain nodes :

6 7 8 9 10 11 13 19 20 21 22 23 24 26 27

ring nodes :

1 2 3 4 5 12 14 15 16 17 18

chain bonds :

2-6 3-22 6-7 6-13 7-8 8-9 9-10 9-19 10-11 11-12 19-20 19-21 22-23
22-24 23-26 26-27

ring bonds :

1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18

exact/norm bonds :

1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24 23-26 26-27

exact bonds :

1-5 3-4 3-22 4-5 6-7 9-10 9-19 10-11 11-12

normalized bonds :

12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21

isolated ring systems :

containing 1 : 12 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 26:CLASS 27:CLASS

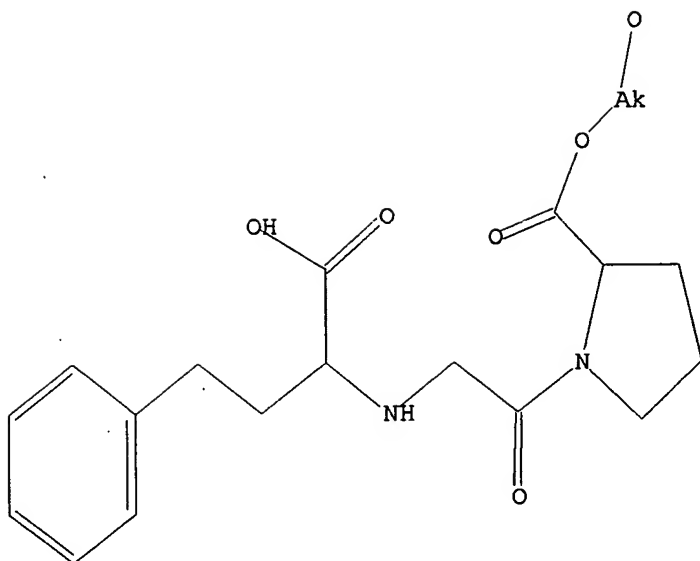
L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR

10527062



Structure attributes must be viewed using STN Express query preparation.

=> s 11

SAMPLE SEARCH INITIATED 16:12:36 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 142 TO ITERATE

100.0% PROCESSED 142 ITERATIONS.
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 2126 TO 3554
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s 11 full

FULL SEARCH INITIATED 16:12:40 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2947 TO ITERATE

100.0% PROCESSED 2947 ITERATIONS
SEARCH TIME: 00.00.01

18 ANSWERS

L3 18 SEA SSS FUL L1

=> fil hcaplus

COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION

FULL ESTIMATED COST

172.10

172.31

FILE 'HCAPLUS' ENTERED AT 16:12:46 ON 23 FEB 2007
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FILE COVERS 1907 - 23 Feb 2007 VOL 146 ISS 10
FILE LAST UPDATED: 22 Feb 2007 (20070222/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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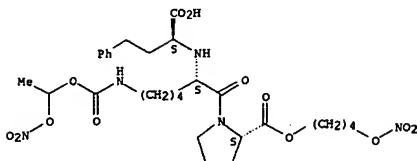
L4 2 L3

=> d ed ibib abs hitstr 1-2

Absolute stereochemistry.

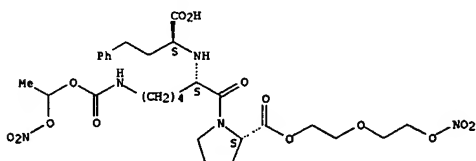
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L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



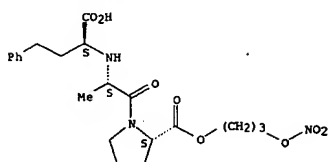
RN 811787-27-6 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-(nitrooxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-31-2 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

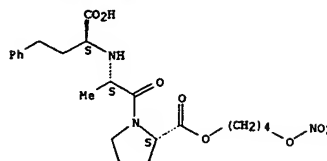


RN 811787-33-4 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

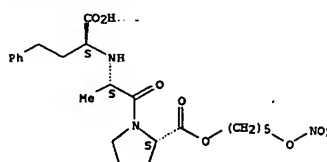
L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Absolute stereochemistry.



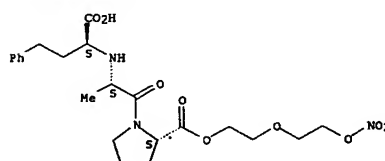
RN 811787-35-6 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[5-(nitrooxy)pentyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-38-9 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-(nitrooxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

ED Entered STN: 26 Mar 2004

ACCESSION NUMBER: 2004:252532 HCAPLUS

DOCUMENT NUMBER: 140:276202

TITLE: Proline esters and preparations containing the same for percutaneous administration
 INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiko; Minowa, Takayuki; Komine, Minoru; Kimura, Kunihiko
 Toaishi Ltd., Japan

PATENT ASSIGNEE(S): PCT Int. Appl., 38 pp.
 SOURCE: CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

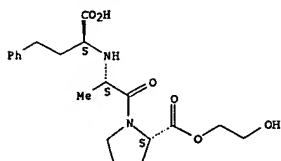
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TR, TW, TZ, TT, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SI, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2498757	A1	20040325	CA 2003-2498757	20030908
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 2005288232	A1	20051229	US 2005-527062	20050309
PRIORITY APPL. INFO.: JP 2002-265276 A 20020911				
WO 2003-JP11420 W 20030908				

OTHER SOURCE(S): MARPAT 140:276202
 AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pt myristate, lauromacrogol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.
 IT 674285-96-2P 674285-97-3P 674285-98-4P
 674285-99-5P 674286-00-1P
 RI: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of proline esters as prodrugs for enalaprilat for percutaneous administration)

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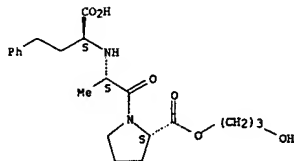
L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 RN 674285-96-2 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



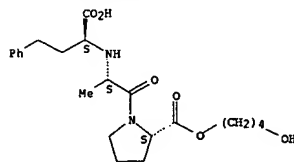
RN 674285-97-3 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(3-hydroxypropyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674285-98-4 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)

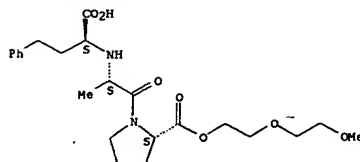
Absolute stereochemistry.



L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

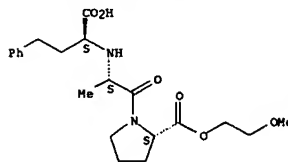
RN 674285-99-5 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-(2-methoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674286-00-1 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

=> s enalaprilat

L5 980 ENALAPRILAT

=> s 15 and prol

=> s 15 and prol?

559583 PROL?

L6 92 L5 AND PROL?

=> s 15 and 13

2 L3

L7 1 L5 AND L3

=> e ed ibib abs hitstr

E1 2 ECZYMA/BI

E2 54883 ED/BI

E3 0 --> ED IBIB ABS HITSTR/BI

E4 30 ED0/BI

E5 1 ED00/BI

E6 1 ED002/BI

E7 28 ED01/BI

E8 2 ED01S/BI

E9 1 ED02AH/BI

E10 3 ED03/BI

E11 2 ED036/BI

E12 1 ED041/BI

=> d ed ibib abs hitstr L7

10527062

Appl.

L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN

ED Entered STN: 26 Mar 2004

ACCESSION NUMBER: 2004:252532 HCAPLUS

DOCUMENT NUMBER: 140:276202

TITLE: Proline esters and preparations containing the same for percutaneous administration

INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiko; Minowa, Takayuki; Komine, Miho; Kimura, Kunihiko

PATENT ASSIGNEE(S): Toaisho Ltd., Japan

SOURCE: PCT Int. Appl., 38 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TH, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: CH, CM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2498757	A1	20040325	CA 2003-2498757	20030908
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 2005288232	A1	20051229	US 2005-527062	20050309
PRIORITY APPL. INFO.:				
OTHER SOURCE(S): HARPAT 140:276202				

AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pr myristate, laurmacrogol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.

IT 674285-96-2P 674285-97-3P 674285-98-4P 674285-99-5P 674286-00-1P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological

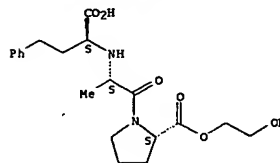
L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

study); PREP (Preparation); USES (Uses) (prepn. of proline esters as prodrugs for enalaprilat for percutaneous administration)

RN 674285-96-2 HCAPLUS

CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

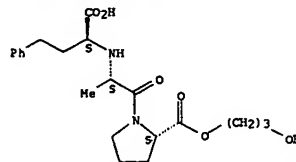
Absolute stereochemistry.



RN 674285-97-3 HCAPLUS

CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(3-hydroxypropyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

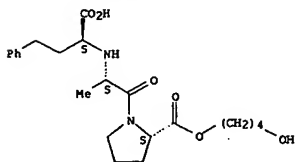


RN 674285-98-4 HCAPLUS

CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

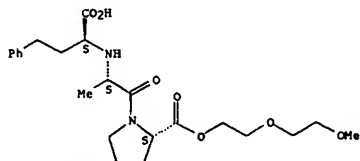
L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 674285-99-5 HCAPLUS

CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

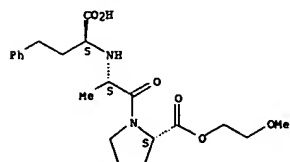
Absolute stereochemistry.



RN 674286-00-1 HCAPLUS

CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

=> log y

COST IN U.S. DOLLARS

SINCE FILE

ENTRY

TOTAL

SESSION

FULL ESTIMATED COST

28.81

201.12

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

ENTRY

TOTAL

SESSION

CA SUBSCRIBER PRICE

-2.34

-2.34

STN INTERNATIONAL LOGOFF AT 16:15:31 ON 23 FEB 2007

10527062

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTANAG1626

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS	4	OCT 30	CHEMLIST enhanced with new search and display field
NEWS	5	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS	6	NOV 10	CA/CAPLUS F-Term thesaurus enhanced
NEWS	7	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS	8	NOV 20	CA/CAPLUS to MARPAT accession number crossover limit increased to 50,000
NEWS	9	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS	10	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS	11	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS	12	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS	13	DEC 18	CA/CAPLUS pre-1967 chemical substance index entries enhanced with preparation role
NEWS	14	DEC 18	CA/CAPLUS patent kind codes updated
NEWS	15	DEC 18	MARPAT to CA/CAPLUS accession number crossover limit increased to 50,000
NEWS	16	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS	17	DEC 27	CA/CAPLUS enhanced with more pre-1907 records
NEWS	18	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS	19	JAN 16	CA/CAPLUS Company Name Thesaurus enhanced and reloaded
NEWS	20	JAN 16	IPC version 2007.01 thesaurus available on STN
NEWS	21	JAN 16	WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS	22	JAN 22	CA/CAPLUS updated with revised CAS roles
NEWS	23	JAN 22	CA/CAPLUS enhanced with patent applications from India
NEWS	24	JAN 29	PHAR reloaded with new search and display fields
NEWS	25	JAN 29	CAS Registry Number crossover limit increased to 300,000 in multiple databases

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
NEWS X25	X.25 communication option no longer available

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 08:16:30 ON 09 FEB 2007

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 08:16:41 ON 09 FEB 2007

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STRUCTURE FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

DICTIONARY FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

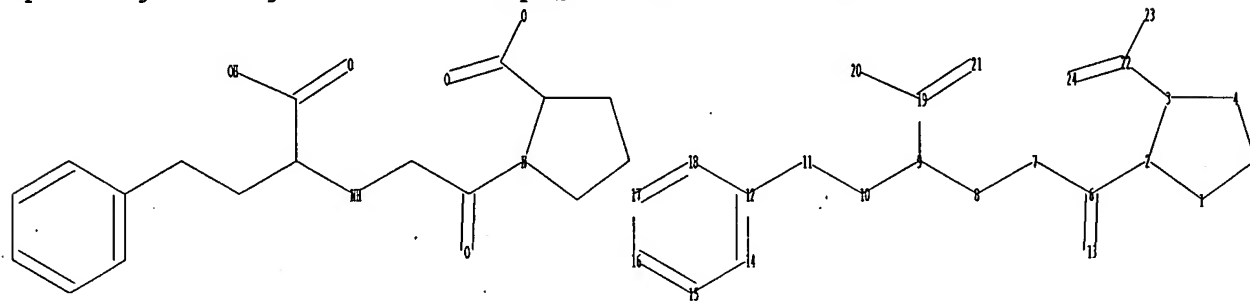
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10527062.str



chain nodes :

6 7 8 9 10 11 13 19 20 21 22 23 24

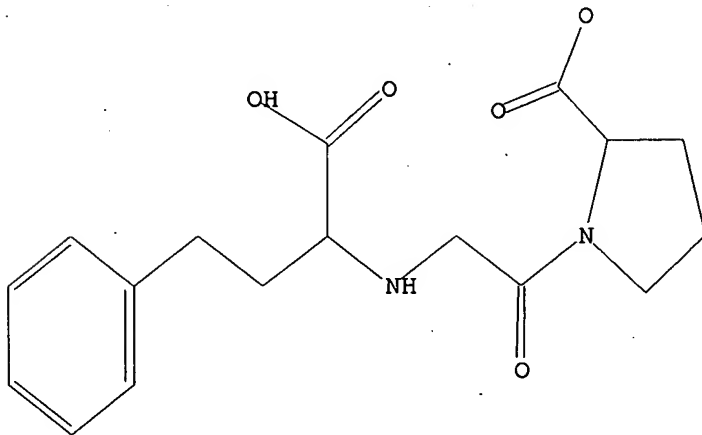
ring nodes :

1 2 3 4 5 12 14 15 16 17 18

```
chain bonds :
2-6 3-22 6-7 6-13 7-8 8-9 9-10 9-19 10-11 11-12 19-20 19-21 22-23
22-24
ring bonds :
1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18
exact/norm bonds :
1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24
exact bonds :
1-5 3-4 3-22 4-5 6-7 9-10 9-19 10-11 11-12
normalized bonds :
12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21
isolated ring systems :
containing 1 : 12 :
```

```
Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS
```

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=> d l1
L1 HAS NO ANSWERS
L1                                STR
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Structure attributes must be viewed using STN Express query preparation.

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100.0% PROCESSED      142 ITERATIONS      14 ANSWERS
SEARCH TIME: 00.00.01
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FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH    **COMPLETE**
PROJECTED ITERATIONS:   2126 TO    3554
PROJECTED ANSWERS:      56 TO     504

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10527062

L2 14 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 08:17:06 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 2944 TO ITERATE

100.0% PROCESSED 2944 ITERATIONS

311 ANSWERS

SEARCH TIME: 00.00.01

L3 311 SEA SSS FUL L1

=> fil hcaplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

172.10

172.31

FILE 'HCAPLUS' ENTERED AT 08:17:11 ON 09 FEB 2007

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FILE COVERS: 1907 - 9 Feb 2007 VOL 146 ISS 8

FILE LAST UPDATED: 8 Feb 2007 (20070208/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 2253 L3

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

5.20

177.51

FILE 'REGISTRY' ENTERED AT 08:18:20 ON 09 FEB 2007

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STRUCTURE FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

DICTIONARY FILE UPDATES: 7 FEB 2007 HIGHEST RN 919834-45-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

10527062

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

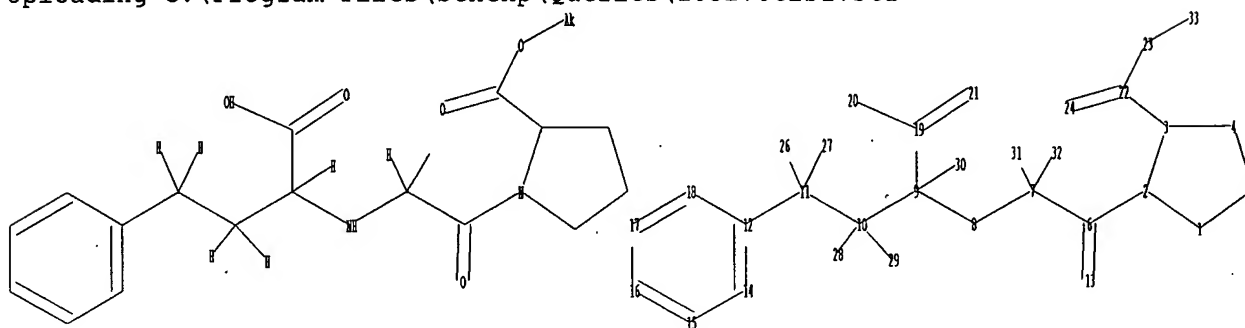
Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10527062sl.str



chain nodes :

6 7 8 9 10 11 13 19 20 21 22 23 24 26 27 28 29 30 31 32 33

ring nodes :

1 2 3 4 5 12 14 15 16 17 18

chain bonds :

2-6 3-22 6-7 6-13 7-8 7-31 7-32 8-9 9-10 9-19 9-30 10-11 10-28 10-29
11-12 11-26 11-27 19-20 19-21 22-23 22-24 23-33

ring bonds :

1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18

exact/norm bonds :

1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24 23-33

exact bonds :

1-5 3-4 3-22 4-5 6-7 7-31 7-32 9-10 9-19 9-30 10-11 10-28 10-29 11-12
11-26 11-27

normalized bonds :

12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21

isolated ring systems :

containing 1 : 12 :

Match level.:

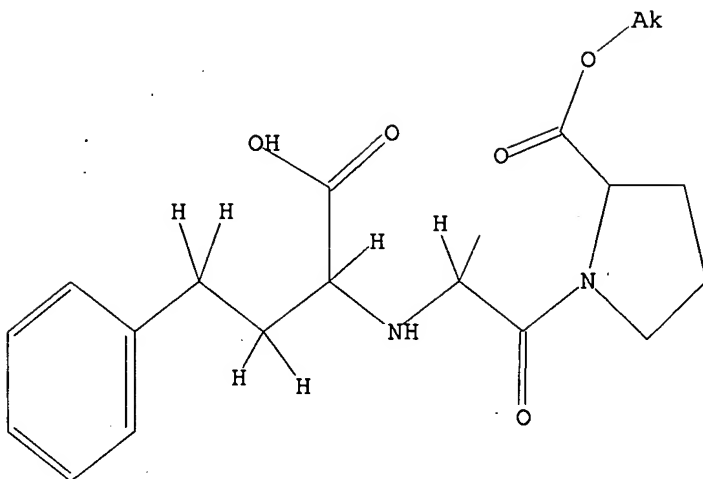
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 26:CLASS 27:CLASS
28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:CLASS

10527062

=> d 15

L5 HAS NO ANSWERS

L5 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 15

SAMPLE SEARCH INITIATED 08:19:56 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 142 TO ITERATE

100.0% PROCESSED 142 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 2126 TO 3554

PROJECTED ANSWERS: 1 TO 80

L6 1 SEA SSS SAM L5

=> s 15 full

FULL SEARCH INITIATED 08:20:00 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 2944 TO ITERATE

100.0% PROCESSED 2944 ITERATIONS

37 ANSWERS

SEARCH TIME: 00.00.01

L7 37 SEA SSS FUL L5

=> fil hcaplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

173.00

350.51

FILE 'HCAPLUS' ENTERED AT 08:20:09 ON 09 FEB 2007

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FILE COVERS 1907 - 9 Feb 2007 VOL 146 ISS 8
FILE LAST UPDATED: 8 Feb 2007 (20070208/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 17

L8 10 L7

=> d ibib ed abs hitstr 1-10

10527062

L8 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1124123 HCAPLUS
 DOCUMENT NUMBER: 145:455276
 TITLE: Preparation of amino acid derivatives with high therapeutic index
 INVENTOR(S): Chandran, V. Ravi
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 139pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006241017	A1	20061026	US 2006-343557	20060130
WO 2005046575	A2	20050526	WO 2004-US24901	20040729
V: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CI, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2006287244	A1	20061221	US 2006-442027	20060526
PRIORITY APPLN. INFO.:				
			US 2003-491331P	P 20030729
			WO 2004-US24901	A2 20040729
			US 2006-343557	A2 20060130

ED Entered STN: 27 Oct 2006

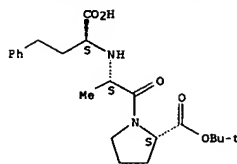
AB The invention is directed to novel therapeutic compds. comprised of an amino acid bonded to a medicament or drug having a hydroxy, amino, carboxy or acylating function. These high-therapeutic index derivs. have the same utility as the drug from which they are made and they have enhanced pharmacol. and pharmaceutical properties. The examples describe the synthesis and activities of amino acid derivs. of propofol, ibuprofen, ketoprofen, ketorolac, aspirin, acetaminophen, cyclosporin A, valproic acid, clopidogrel, dazoxol, benzapril, enalapril, and fenofibric acid. Thus, (1)-ibuprofen esters of L-serine, L-threonine, and L-hydroxyproline were prepared and examined for analgesic, gastric mucosal irritation, toxicity, and pharmacokinetic properties.

IT 674796-29-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

RN 674796-29-3 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L8 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:99521 HCAPLUS
 DOCUMENT NUMBER: 142:156329
 TITLE: Preparation of α-amino acid benzothiazolylthio esters as intermediates for manufacture of ACE inhibitors
 INVENTOR(S): Singh, Girij Pal; Godbole, Himanshu Madhav; Mahajan, Pravin Raghunath; Nehate, Sagar Purushottam
 PATENT ASSIGNEE(S): Lupin Limited, India
 SOURCE: PCT Int. Appl., 108 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005010028	A1	20050203	WO 2003-IN257	20030731
V: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GB, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003272077	A1	20050214	AU 2003-272077	20030731
PRIORITY APPLN. INFO.:				
			WO 2003-IN257	A, 20030731
OTHER SOURCE(S): CASREACT 142:156329; MARPAT 142:156329				

ED Entered STN: 04 Feb 2005

AB The invention relates to esters (S,S)-RCH2CH2CH(CO2R1)NHC(R2)CO-X (I; R is alkyl or Ph; R1 H or alkyl; R2 is alkyl or aminoalkyl; X is 2-benzothiazolylthio) which are intermediates in the manufacture of ACE inhibitors I (X is an amino acid or derivative). The intermediate benzothiazolylthio esters were prepared by reaction of the appropriate acid or acid chloride with 2,2'-dithiobis(benzothiazole) or 2-mercaptobenzothiazole. Thus, treatment of N-[(1S)-(ethoxycarbonyl)-3-phenylpropyl]-N6-(trifluoroacetyl)-L-lysine (preparation given) with 2,2'-dithiobis(benzothiazole), followed by coupling with L-proline Et ester and deprotection, afforded lisinopril dihydrate.

IT 827622-34-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

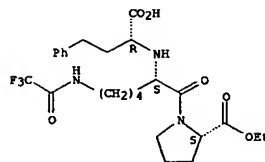
(preparation of α-amino acid benzothiazolylthio esters as intermediates for manufacture of ACE inhibitors)

RN 827622-34-4 HCAPLUS

CN L-Proline, N2-[(1R)-1-carboxy-3-phenylpropyl]-N6-(trifluoroacetyl)-L-lysyl-, 2-ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



REFERENCE COUNT: 2

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:1124626 HCAPLUS

DOCUMENT NUMBER: 142:79913

TITLE: Enalapril-nitroxy derivatives and related compounds as ace inhibitors for the treatment of cardiovascular diseases

INVENTOR(S): Almirante, Nicoletta; Ongini, Ennio; Del Soldato, Piero

PATENT ASSIGNEE(S): Nicox S. A., Fr.

SOURCE: PCT Int. Appl., 132 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004110432	A1	20041223	WO 2004-EP51089	20040611
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004246821	A1	20041223	AU 2004-246821	20040611
CA 2529478	A1	20041223	CA 2004-2529478	20040611
EP 1635816	A1	20060322	EP 2004-741779	20040611
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 2004011430	A	20060725	BR 2004-11430	20040611
CN 1809345	A	20060726	CN 2004-80017127	20040611
US 2005004100	A1	20050106	US 2004-869038	20040617
NO 2006000268	A	20060315	NO 2006-268	20060118
PRIORITY APPLN. INFO.:				
			WO 2004-EP51089	A 20030619
				W 20040611

OTHER SOURCE(S): MARPAT 142:79913

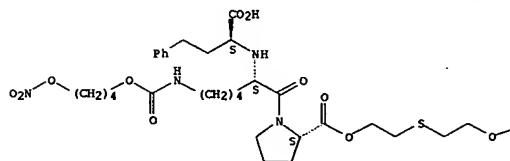
ED Entered STN: 23 Dec 2004

AB Disclosure is compds. with a general formula of A-(X1-ONO2)S, wherein A is a known ACE-inhibitor such as enalapril and X1 is a spacer such as a (C1-C6)-alkylene. The compds. can be used as ACE-inhibitors for the treatment of cardiovascular and renal diseases and inflammatory processes. The compds. have an improved pharmacol. activity when compared with the structurally closest related prior art compound. For example, synthesized N-[(1S)-1-ethoxycarbonyl-3-phenylpropyl]-L-alanyl-L-proline 3-nitroxypropyl ester hydrogen maleate was found to have good vasorelaxation property.

IT 811787-07-2 811787-09-4 811787-11-8
811787-13-0 811787-15-2 811787-17-4
811787-19-6 811787-21-0 811787-23-2
811787-25-4 811787-27-6 811787-29-8
811787-31-2 811787-33-4 811787-35-6

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

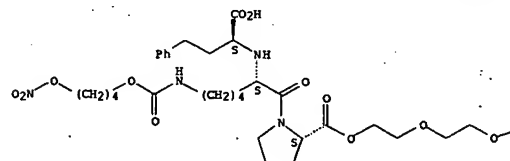


PAGE 1-B

-NO2

RN 811787-13-0 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



PAGE 1-A

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

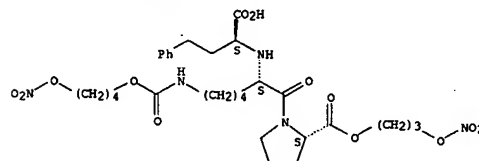
811787-38-9 811787-39-0

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enalapril-nitroxy derivs. and related compds. as ACE inhibitors for the treatment of cardiovascular and renal diseases)

RN 811787-07-2 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

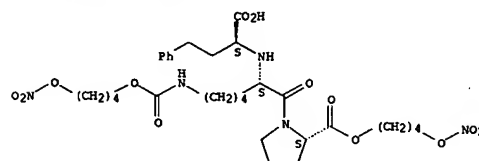
Absolute stereochemistry.



RN 811787-09-4 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-11-8 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



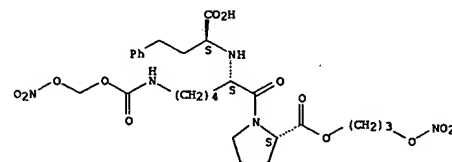
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

-NO2

RN 811787-15-2 HCAPLUS
CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

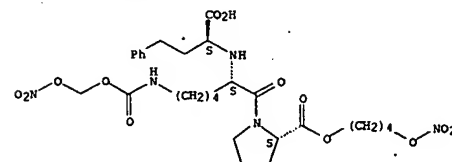
Absolute stereochemistry.



RN 811787-17-4 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



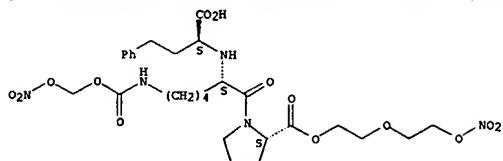
RN 811787-19-6 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

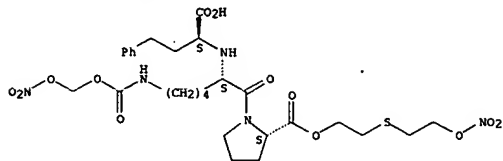
10527062

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



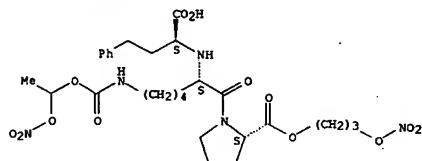
RN 811787-21-0 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-23-2 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

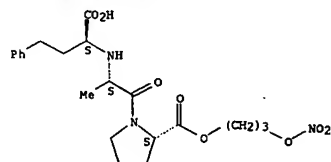


RN 811787-25-4 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI)

L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

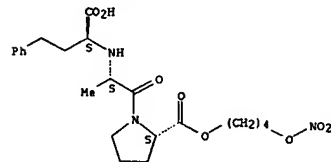
RN 811787-31-2 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



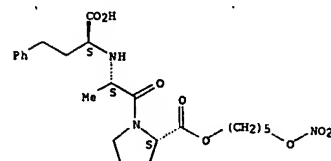
RN 811787-33-4 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-35-6 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[5-(nitrooxy)pentyl] ester (9CI) (CA INDEX NAME)

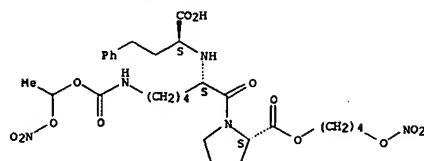
Absolute stereochemistry.



RN 811787-38-9 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[5-(nitrooxy)pentyl] ester (9CI) (CA INDEX NAME)

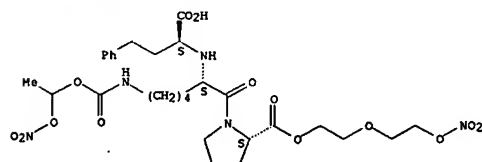
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Absolute stereochemistry.



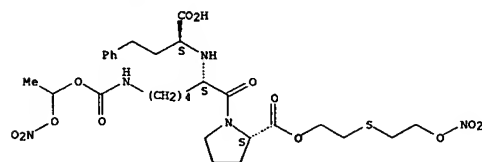
RN 811787-27-6 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



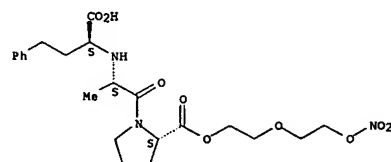
RN 811787-29-8 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



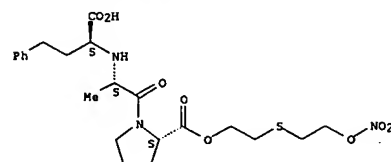
L8 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Absolute stereochemistry.



RN 811787-39-0 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-[[2-(nitrooxy)ethyl]thio]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:252532 HCAPLUS

DOCUMENT NUMBER: 140:276202

TITLE: Proline esters and preparations containing the same for percutaneous administration
 INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiko; Minowa, Takayuki; Komine, Miho; Kimura, Kunihiko

PATENT ASSIGNEE(S): Toseiyo Ltd., Japan
 SOURCE: PCT Int. Appl., 38 pp.
 CODEN: P1XXD2

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
V: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2498757	A1	20040325	CA 2003-2498757	20030908
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 2005288232	A1	20051229	US 2005-527062	20050309
PRIORITY APPLN. INFO.: JP 2002-265276 A 20020911 WO 2003-JP11420 W 20030908				

OTHER SOURCE(S): MARPAT 140:276202

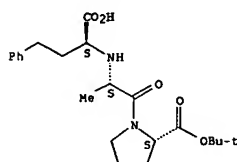
ED Entered STN: 26 Mar 2004

AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing
 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pr myristate, lauramagrol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.
 IT 674796-29-3P, 1-[N-[(1S)-1-Carboxy-3-phenylpropyl]-L-alanyl]-L-proline tert-butyl ester
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

(Reactant or reagent)
 (prepn. of proline esters as prodrugs for enalaprilat for percutaneous administration)
 RN 674796-29-3 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

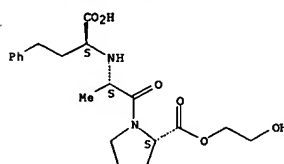
Absolute stereochemistry.



IT 674285-96-2P 674285-97-3P 674285-98-4P

674285-99-5P 674286-00-1P
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of proline esters as prodrugs for enalaprilat for percutaneous administration)
 RN 674285-96-2 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

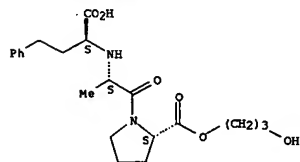


RN 674285-97-3 HCAPLUS

CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(3-hydroxypropyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

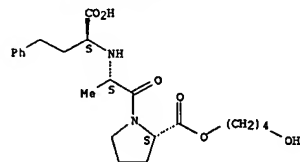
L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 674285-98-4 HCAPLUS

CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)

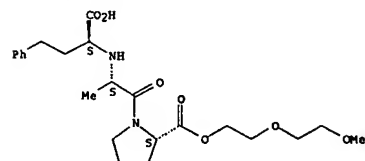
Absolute stereochemistry.



RN 674285-99-5 HCAPLUS

CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-(2-methoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

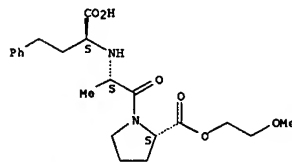


RN 674286-00-1 HCAPLUS

CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



REFERENCE COUNT: 3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:630627 HCAPLUS

DOCUMENT NUMBER: 121:230627

TITLE: Design, synthesis and enzyme inhibitory activities of new trifluoromethyl-containing inhibitors for angiotensin converting enzyme

AUTHOR(S): Ojima, Iwao; Jameison, Fabian A.; Pete, Bela; Radunz, Hans; Schittenhelm, Christine; Lindner, Hans J.; Emich, Arturo E.

CORPORATE SOURCE: Dep. Chem., State Univ. New York, Stony Brook, NY, 11794-3400, USA

SOURCE: Drug Design and Discovery (1994), 11(2), 91-113

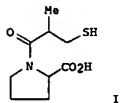
CODEN: DDDIEV; ISSN: 1055-9612

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 12 Nov 1994

GI



AB Trifluoromethyl-containing analogs of captopril (I) as well as analogs and homologs of enalaprilat were prepared and evaluated for inhibition of angiotensin converting system (ACE). Direct substitution of trifluoromethyl for Me produced a very potent captopril analog with an IC50 of 3×10^{-10} M in vitro. Hydrophobicity and conformational effects of trifluoromethyl group are among the reasons accounting for this activity. Structure-activity relation is studied based on mol. mechanics calcs. using a II-SCF-mol. mechanics program (PIMM) as well as SYBYL mol. mechanics program. Simultaneous incorporation of trifluoromethyl and an indoline residue unexpectedly yielded a less potent captopril analog (IC50 = 8×10^{-8} M). Enalaprilat analogs derived from replacement of the alanine residue with trifluoronorvaline and trifluoronorleucine residues gave moderately potent compds. (IC50 = $2-6 \times 10^{-8}$ M). The structure-activity relation for these fluoroenalaprilat analogs is discussed in comparison with known analogs.

IT 158140-42-2P 158140-43-3P 158249-81-1P

158249-82-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, as intermediate for captopril or enalaprilat analog)

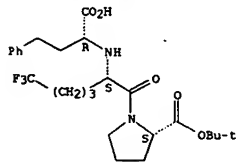
RN 158140-42-2 HCAPLUS

CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-5,5,5-trifluoro-L-norvalyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

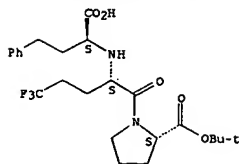
Absolute stereochemistry.

L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Absolute stereochemistry.



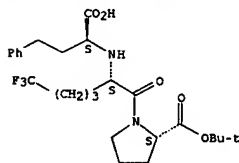
L8 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 158140-43-3 HCAPLUS

CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-6,6,6-trifluoro-L-norleucyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

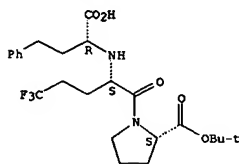
Absolute stereochemistry.



RN 158249-81-1 HCAPLUS

CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-5,5,5-trifluoro-L-norvalyl]-, 2-(1,1-dimethylethyl) ester, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 158249-82-2 HCAPLUS

CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-6,6,6-trifluoro-L-norleucyl]-, 2-(1,1-dimethylethyl) ester, (R)- (9CI) (CA INDEX NAME)

L8 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:235824 HCAPLUS

DOCUMENT NUMBER: 112:235824

TITLE: Angiotensin converting enzyme inhibitors. 9. Novel [[N-(1-carboxy-3-phenylpropyl)amino]acyl]glycine derivatives with diuretic activity

AUTHOR(S): Barton, Jeffrey N.; Pivinski, John J.; Skiles, Jerry W.; Regan, John R.; Menard, Paul R.; Desai, Rohit; Golec, F. S.; Reilly, Laurence W.; Goetzen, Thomas; et al.

CORPORATE SOURCE: Rorer Cent. Res., Horsham, PA, 19044, USA

SOURCE: Journal of Medicinal Chemistry (1990), 33(6), 1600-6

CODEN: JMCMAR; ISSN: 0022-2623

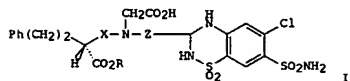
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 112:235824

ED Entered STN: 23 Jun 1990

GI



AB A series of mols. having sulfonamide diuretic moieties covalently linked to non-sulfhydryl angiotensin converting enzyme (ACE) inhibitors, e.g. I [R = Et, X = Ala, Z = NMeCH2, (S)-CH(CH2CHMe2); R = H, X = Ala, Lys, Lys(CO2CH2Ph), Z = CH2; R = H, X = Ala, Z = (CH2)3, (S)-CHMe], were prepared and tested for both activities. IC50 values for ACE inhibition as low as 7 nM were observed. Discernable diuretic activity was seen for several hydrochlorothiazide-based mols. Effects of the ACE inhibitory and diuretic structures on the resp. potencies are discussed.

IT 126849-86-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

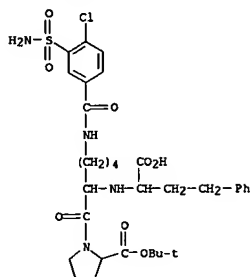
(preparation and deblocking of, with hydrogen chloride)

RN 126849-86-3 HCAPLUS

CN L-Proline, 1-[N6-[3-(aminosulfonyl)-4-chlorobenzoyl]-N2-(1-carboxy-3-phenylpropyl)-L-lysyl]-, 2-(1,1-dimethylethyl) ester, (S)- (9CI) (CA INDEX NAME)

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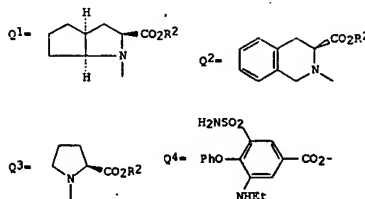
L8 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L8 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:458356 HCAPLUS
 DOCUMENT NUMBER: 111:58356
 TITLE: Preparation of N-(1-carboxy-3-phenylpropyl)alanine derivatives as diuretics and antihypertensives
 INVENTOR(S): Bretting, Claus Aage Svenegaard; Bruun, Herta; Feit, Peter Werner; Godtfredsen, Vagn Ole
 PATENT ASSIGNEE(S): Leo Pharmaceutical Products Ltd. A/S, Den.
 SOURCE: Brit. UK Pat. Appl., 35 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

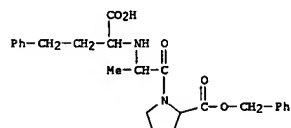
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2207129	A	19890125	GB 1987-16466	19870713
PRIORITY APPLN. INFO.: ED Entered STN: 20 Aug 1989 GI				



AB (S,S)-PhCH2CH2CH(CO2R1)NHCH2MeCOR [I; R = azole and azine groups Q1-Q3, R4NCH2CO2H; z1 of R1,R2 = R5CO2Z and the other may be H, alkyl, aralkyl; R4 = 2-indanyl; R5 = residue of a compound with diuretic and/or saluretic activity; Z = CHR3, CH2CH(OH)CH2, CH2CR6:CR7CH2; R3 = H, alkyl, aralkyl; R6R7 = OCO2] were prepared as diuretics and antihypertensives (no data). To 3-ethylamino-4-phenoxy-5-sulfamoylbenzoic acid in CH2Cl2 containing NaHCO3 and Bu4NHSO4 in H2O was added ClSO3CH2Cl in CH2Cl2 and stirring was continued 15 min to give the chloromethyl ester Q4CH2Cl which was stirred 6 days with Q3OCOCH2Ph (R2 = K) to give Q3OCOCH2Ph (R2 = CH2Q4). The latter was hydrogenolized to Q3H (R2 = CH2Q4) which was stirred 5 h with I (R = R1 = H) in DMF containing hydroxybenzotriazole and DCC to give I (R = Q3, R1 = H, R2 = CH2Q4).
 IT 85918-74-7

L8 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

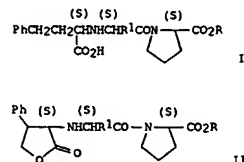
RL: RCT (Reactant); RACT (Reactant or reagent)
 RN 85918-74-7 HCAPLUS
 CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



L8 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:213348 HCAPLUS
 DOCUMENT NUMBER: 110:213348
 TITLE: Preparation of alanylproline derivatives usable in the drug industry
 INVENTOR(S): Fodor, Tamas; Fischer, Janos; Stefkó, Bela; Dobay, Laszlo
 PATENT ASSIGNEE(S): Richter, Gedeon, Vegyeszeti Gyar Rt., Hung.
 SOURCE: Hung. Teljes, 16 pp.
 CODEN: HUXXB
 DOCUMENT TYPE: Patent
 LANGUAGE: Hungarian
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HU 44578	A2	19880328	HU 1986-2688	19860627
HU 196834	B	19890130	HU 1986-2688	19860627
PRIORITY APPLN. INFO.: ED Entered STN: 10 Jun 1989 GI				

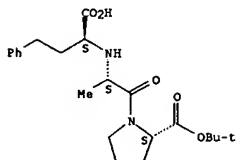


AB Title compds. (I; R = H, protective group; R1 = alkyl, alkylamino) are prepared by reduction of the dihydrofuranone derivs. II.
 N-[5(R)-Phenylidihydro-2(3H)furanon-3(S)-yl]-[S]-alanyl-(S)-proline benzyl ester-HCl (preparation given) was hydrogenated in MeOH, over Pd/charcoal, to give N-[1(S)-carboxy-3-phenylpropyl]-[S]-alanyl-(S)-proline.
 IT 120439-27-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 RN 120439-27-2 HCAPLUS
 CN L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(1,1-dimethylethyl) ester, monohydrochloride, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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L8 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



● HCl

L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:471710 HCAPLUS
 DOCUMENT NUMBER: 103:71710
 TITLE: N-Carboxymethyl(unsaturated)lysyl and α-(α-aminoalkyl)glycyl amino acid antihypertensive agents
 INVENTOR(S): Patchett, Arthur A.; Wu, Mu T.
 PATENT ASSIGNEE(S): Merck and Co., Inc., USA
 SOURCE: S. African, 64 pp.
 CODEN: SFOAAB
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

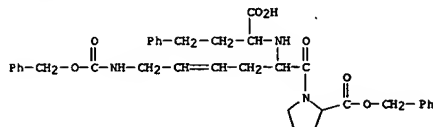
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 8302509	A	19841128	ZA 1983-2509	19830411
			US 1982-367199	A 19820412

PRIORITY APPLN. INFO.:

ED Entered STN: 07 Sep 1985

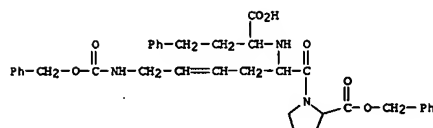
AB Title compds. R1CH(CO2R)NHCHR2CON[(CH2)nR3]CHR4CO2R [R = H, alkyl, aralkyl, aryl; R1 = H, C1-12 alkyl, cyclic alkyl, unsatd. alkyl, substituted alkyl, (un)substituted aryl or heteroaryl, etc.; R2 = (CH2)pX(CH2)qNHR5 [X = CH:CH or C.tplbond.C; R5 = H, alkyl, aralkyl, acyl; p = 0-3; q = 1, 2]; R3 = alkyl, benzofused cycloalkyl or bicycloalkyl, (un)substituted aryl or heteroaryl, substituted alkyl; R4 = H, alkyl; R3 and R4 may be joined with carbon atoms to form s rings; n = 0-4] were prepared as antihypertensives (no data) due to their ability to inhibit angiotensin-converting enzyme. Thus, trans-H2NCH2CH:CHCH2CH(NH2)CO2H was treated with N-benzoyloxycarbonyl-L-lysine-2,3-dicarboximide in H2O and 0.5M methanolic KOH to give 391 trans-2NHCH2CH:CHCH2CH(NH2)CO2H (Z = PhCH2O2C), which was treated with (Boc)2O (Boc = Me3CO2C) in 1M NaOH/Me3COH to give 981 trans-2NHCH2CH:CHCH2CH(NHBoc)CO2H. The latter was coupled with H-L-Pro-OCH2Ph.HCl by DCC in CH2Cl2 containing Et3N to give trans-2NHCH2CH:CHCH2CH(NHBoc)CO-L-Pro-OCH2Ph (II), which was isolated as isomer A and B. I isomer A was Boc-deblocked by CF3CO2H and then treated with PhCH2CH2CO2H in the presence of NaBH3CN to give 471 trans-R6NHCH2CH:CHCH2CH(NHCH(CO2R7)CH2CH2Ph)CO-L-Pro-OR7 II (R6 = Z, R7 = CH2Ph), which was deblocked by HBr/HOAc to give 621 II (R6 = R7 = H).
 IT 97589-99-6P 97590-00-6P 97590-04-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and deblocking of)
 RN 97589-99-6 HCAPLUS
 CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (R)- (9CI) (CA INDEX NAME)

L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



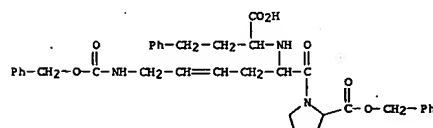
RN 97590-00-6 HCAPLUS

CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



RN 97590-04-0 HCAPLUS

CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(Z)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (R)- (9CI) (CA INDEX NAME)



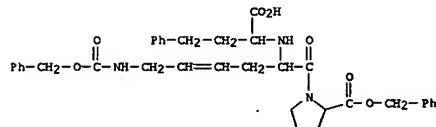
IT 97531-72-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reductive alkylation of, with oxophenylbutanoic acid)

RN 97531-72-1 HCAPLUS

CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(E)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester (9CI) (CA INDEX NAME)

L8 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

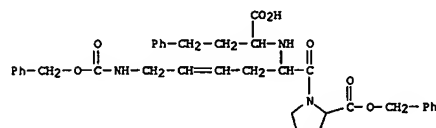


IT 97590-05-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 97590-05-1 HCAPLUS

CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-(Z)-4,5-didehydro-N6-[(phenylmethoxy)carbonyl]lysyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



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L8 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STM

ACCESSION NUMBER: 1983:488574 HCAPLUS

DOCUMENT NUMBER: 99:88574

TITLE: Amino acid derivatives as antihypertensives

INVENTOR(S): Harris, Elbert E.; Patchett, Arthur A.; Tristram,

Edward W.; Wyvratt, Matthew J.

PATENT ASSIGNEE(S): Merck and Co., Inc., USA

SOURCE: U.S., 33 pp. Cont.-in-part of U.S. Ser. No. 79,898,

abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4374829	A	19830222	US 1981-235335	19810217
CS 237325	B2	19850716	CS 1982-1339	19820226
CS 237326	B2	19850716	CS 1982-1340	19820226
CS 237327	B2	19850716	CS 1982-1341	19820226
CS 237328	B2	19850716	CS 1982-1342	19820226
US 4472380	A	19840918	US 1982-423916	19820927
CA 1275349	C2	19901016	CA 1986-518334	19860916
CA 1300313	C2	19920505	CA 1986-518335	19860916
CA 1262684	A2	19891107	CA 1988-576715	19880907
CA 1276559	C2	19901120	CA 1988-576716	19880907
CA 1275350	C2	19901016	CA 1989-607198	19890801

PRIORITY APPLN. INFO.:

US 1978-968249	A2	19781211
US 1979-36279	A2	19790507
US 1979-79898	A2	19791009
CA 1979-341340	A3	19791206
CS 1979-8645	A3	19791211
US 1981-235335	A3	19810217

OTHER SOURCE(S): CASREACT 99:88574

ED Entered STM: 12 May 1984

AB ROC(R1)R2NHC(R3)CONR4CR5R7COR6 [R,R6 = OH, alkoxy, alkenoxy, dialkylaminoalkoxy, acylaminoalkoxy, acylaminoalkoxy, (un)substituted aryloxy or aralkoxy, NH2, alkylamino, dialkylamino, arylalkylamino, NHOH; R1 = H, C1-20 alkyl, substituted alkyl or Ph, (un)substituted aralkyl, heteroaralkyl, aralkenyl or heteroaralkenyl; R2, R7 = H, alkyl; R3 = H, (un)substituted alkyl or phenylalkyl; R4 = H alkyl; R5 = (un)substituted alkyl, Ph, phenylalkyl, hydroxyphenylalkyl; NR4CR5 = (un)substituted ring] were prepared as antihypertensives and angiotensin-converting enzyme inhibitors (no data). Thus, H-L-Ala-L-Pro-OH was condensed with PhCH2COCO2H in the presence of NaBH3CN to give diastereomeric PhCH2CH(CO2H)-L-Ala-L-Pro-OH.

IT 85918-69-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

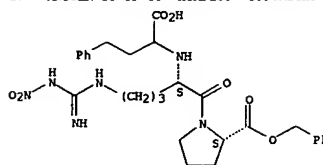
(preparation and hydrogenolysis of)

RN 85918-69-0 HCAPLUS

CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-N5-(imino(nitroamino)methyl)-L-ornithyl]-, 2-(phenylmethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STM (Continued)

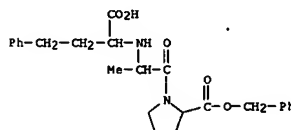


IT 85918-74-7P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 85918-74-7 HCAPLUS

CN L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-L-alanyl]-, 2-(phenylmethyl) ester, (S)- (9CI) (CA INDEX NAME)



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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

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SESSION

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NEWS 6 NOV 10 CA/CAPLUS F-Term thesaurus enhanced
NEWS 7 NOV 10 STN Express with Discover! free maintenance release Version
8.01c now available
NEWS 8 NOV 20 CA/CAPLUS to MARPAT accession number crossover limit increased
to 50,000
NEWS 9 DEC 01 CAS REGISTRY updated with new ambiguity codes
NEWS 10 DEC 11 CAS REGISTRY chemical nomenclature enhanced
NEWS 11 DEC 14 WPIDS/WPINDEX/WPIX manual codes updated
NEWS 12 DEC 14 GBFULL and FRFULL enhanced with IPC 8 features and
functionality
NEWS 13 DEC 18 CA/CAPLUS pre-1967 chemical substance index entries enhanced
with preparation role
NEWS 14 DEC 18 CA/CAPLUS patent kind codes updated
NEWS 15 DEC 18 MARPAT to CA/CAPLUS accession number crossover limit increased
to 50,000
NEWS 16 DEC 18 MEDLINE updated in preparation for 2007 reload
NEWS 17 DEC 27 CA/CAPLUS enhanced with more pre-1907 records
NEWS 18 JAN 08 CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS 19 JAN 16 CA/CAPLUS Company Name Thesaurus enhanced and reloaded
NEWS 20 JAN 16 IPC version 2007.01 thesaurus available on STN
NEWS 21 JAN 16 WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS 22 JAN 22 CA/CAPLUS updated with revised CAS roles
NEWS 23 JAN 22 CA/CAPLUS enhanced with patent applications from India

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NEWS 24 JAN 29 PHAR reloaded with new search and display fields
NEWS 25 JAN 29 CAS Registry Number crossover limit increased to 300,000 in
multiple databases
NEWS 26 FEB 13 CASREACT coverage to be extended
NEWS 27 Feb 15 PATDPASPC enhanced with Drug Approval numbers
NEWS 28 Feb 15 RUSSIAPAT enhanced with pre-1994 records
NEWS 29 Feb 23 KOREAPAT enhanced with IPC 8 features and functionality

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MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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DICTIONARY FILE UPDATES: 22 FEB 2007 HIGHEST RN 922800-14-4

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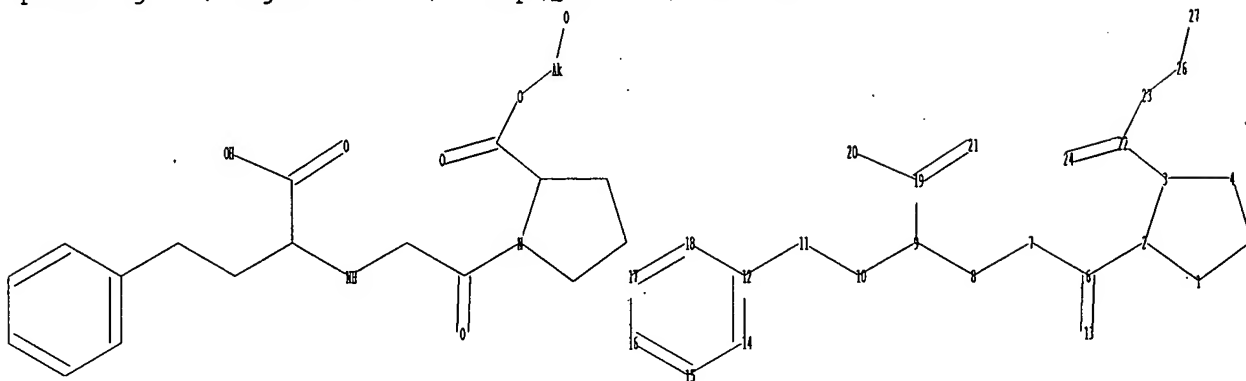
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predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

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<http://www.cas.org/ONLINE/UG/regprops.html>

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chain nodes :

6 7 8 9 10 11 13 19 20 21 22 23 24 26 27

ring nodes :

1 2 3 4 5 12 14 15 16 17 18

chain bonds :

2-6 3-22 6-7 6-13 7-8 8-9 9-10 9-19 10-11 11-12 19-20 19-21 22-23
22-24 23-26 26-27

ring bonds :

1-2 1-5 2-3 3-4 4-5 12-14 12-18 14-15 15-16 16-17 17-18

exact/norm bonds :

1-2 2-3 2-6 6-13 7-8 8-9 22-23 22-24 23-26 26-27

exact bonds :

1-5 3-4 3-22 4-5 6-7 9-10 9-19 10-11 11-12

normalized bonds :

12-14 12-18 14-15 15-16 16-17 17-18 19-20 19-21

isolated ring systems :

containing 1 : 12 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS

10:CLASS 11:CLASS 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom

19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 26:CLASS 27:CLASS

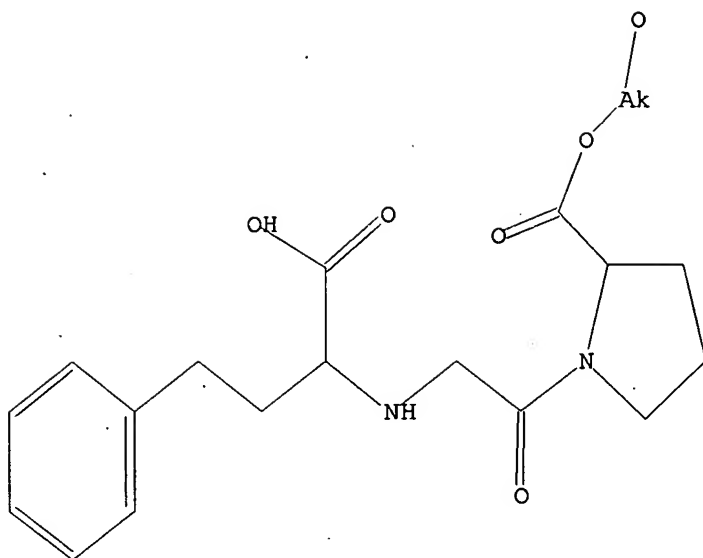
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L1 HAS NO ANSWERS

L1 STR

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=> s l1

SAMPLE SEARCH INITIATED 16:12:36 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 142 TO ITERATE

100.0% PROCESSED 142 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 2126 TO 3554

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 16:12:40 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 2947 TO ITERATE

100.0% PROCESSED 2947 ITERATIONS

18 ANSWERS

SEARCH TIME: 00.00.01

L3 18 SEA SSS FUL L1

=> fil hcaplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

172.10

172.31

FILE 'HCAPLUS' ENTERED AT 16:12:46 ON 23 FEB 2007

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10527062

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FILE COVERS 1907 - 23 Feb 2007 VOL 146 ISS 10
FILE LAST UPDATED: 22 Feb 2007 (20070222/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 2 L3

=> d ed ibib abs hitstr 1-2

10527062

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

ED Entered STN: 23 Dec 2004

ACCESSION NUMBER: 2004:1124626 HCAPLUS

DOCUMENT NUMBER: 142:79913

TITLE: Enalapril-nitroxy derivatives and related compounds as ace inhibitors for the treatment of cardiovascular diseases

INVENTOR(S): Almirante, Nicoletta; Ongini, Ennio; Del Soldato, Piero

PATENT ASSIGNEE(S): Nicox S. A., Fr.
SOURCE: PCT Int. Appl., 132 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004110432	A1	20041223	WO 2004-EP51089	20040611
M:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BV, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZH, ZW			
RW:	EW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZH, ZW, AM, AZ, BY, BG, KZ, MD, RU, T3, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2004246821	A1	20041223	AU 2004-246821	20040611
CA 2529478	A1	20041223	CA 2004-2529478	20040611
EP 1635816	A1	20060322	EP 2004-741779	20040611
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
BR 2004011430	A	20060725	BR 2004-11430	20040611
CN 1809345	A	20060726	CN 2004-80017127	20040611
US 2005004100	A1	20050106	US 2004-869038	20040617
NO 2006000268	A	20060315	NO 2006-268	20060118
PRIORITY APPLN. INFO.:			EP 2003-101796	A 20030619
			WO 2004-EP51089	W 20040611

OTHER SOURCE(S):

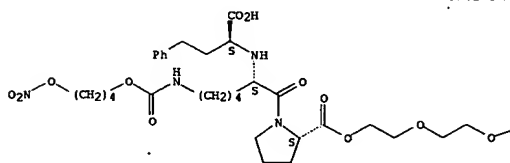
MARPAT 142:79913

AB Disclosure is compds. with a general formula of A-(X1-ONO2)S, wherein A is a known ACE-inhibitor such as enalapril and X1 is a spacer such as a (C1-C6)-alkylene. The compds. can be used as ACE-inhibitors for the treatment of cardiovascular and renal diseases and inflammatory processes. The compds. have an improved pharmacol. activity when compared with the structurally closest related prior art compound. For example, synthesized N-[(1S)-1-ethoxycarbonyl-3-phenylpropyl]-L-alanyl-L-proline 3-nitroxypropyl ester hydrogen maleate was found to have good vasorelaxation property.

IT 811787-07-2 811787-09-4 811787-13-0
811787-15-2 811787-17-4 811787-19-6
811787-23-2 811787-25-4 811787-27-6
811787-31-2 811787-33-4 811787-35-6
811787-38-9

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



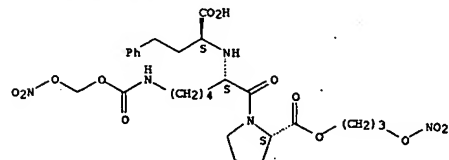
PAGE 1-B

-NO2

RN 811787-15-2 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-
[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI)
(CA INDEX NAME)

Absolute stereochemistry.



RN 811787-17-4 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-
[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

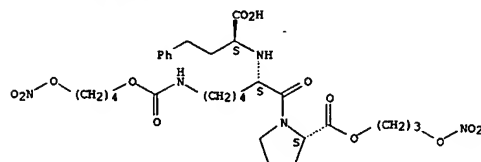
L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RL: THU (Therapeutic use); BIO: (Biological study); USES (Uses)
(enalapril-nitroxy derivative and related compds. as ACE inhibitors for the treatment of cardiovascular and renal diseases)

RN 811787-07-2 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-
(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI)
(CA INDEX NAME)

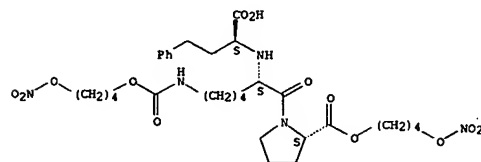
Absolute stereochemistry.



RN 811787-09-4 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-
(nitrooxy)butoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI)
(CA INDEX NAME)

Absolute stereochemistry.



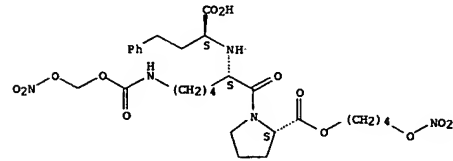
RN 811787-13-0 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[4-
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(9CI) (CA INDEX NAME)

Absolute stereochemistry.



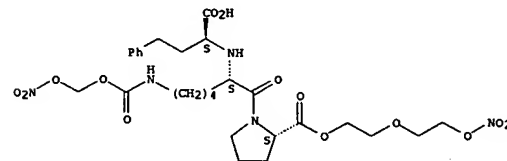
L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 811787-19-6 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-
[[(nitrooxy)methoxy]carbonyl]-L-lysyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl]
ester (9CI) (CA INDEX NAME)

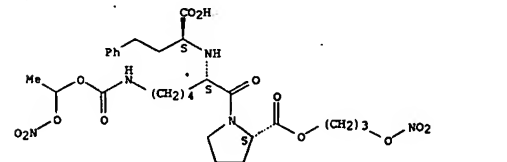
Absolute stereochemistry.



RN 811787-23-2 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-
(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[3-(nitrooxy)propyl] ester (9CI)
(CA INDEX NAME)

Absolute stereochemistry.



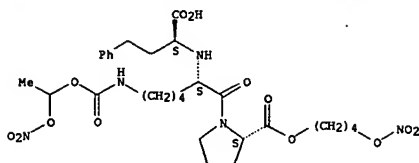
RN 811787-25-4 HCAPLUS

CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-
(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[4-(nitrooxy)butyl] ester (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

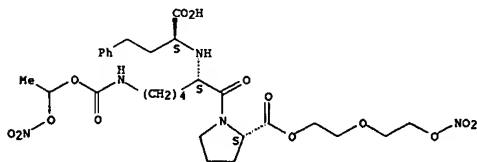
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L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



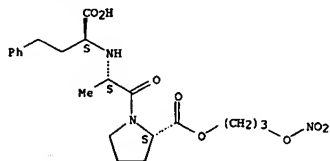
RN 811787-27-6 HCAPLUS
 CN L-Proline, N2-[(1S)-1-carboxy-3-phenylpropyl]-N6-[[1-(nitrooxy)ethoxy]carbonyl]-L-lysyl-, 2-[2-[(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-31-2 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[3-(nitrooxy)propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

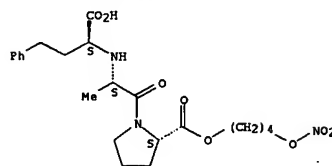


RN 811787-33-4 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[4-(nitrooxy)butyl] ester (9CI) (CA INDEX NAME)

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

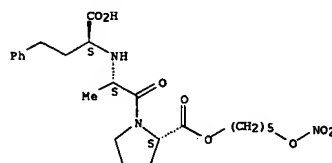
L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

Absolute stereochemistry.



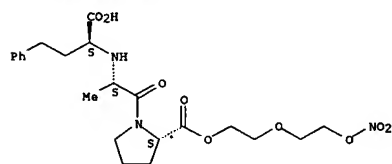
RN 811787-35-6 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[5-(nitrooxy)pentyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 811787-38-9 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-[2-(nitrooxy)ethoxy]ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

ED Entered STN: 26 Mar 2004
 ACCESSION NUMBER: 2004:252532 HCAPLUS
 DOCUMENT NUMBER: 140:276202
 TITLE: Proline esters and preparations containing the same for percutaneous administration
 INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiko; Minowa, Takayuki; Komine, Miho; Kimura, Kunihiko
 PATENT ASSIGNEE(S): Toeiyo Ltd., Japan
 SOURCE: PCT Int. Appl., 38 pp.
 CODEN: PFIK02
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2498757	A1	20040325	CA 2003-2498757	20030908
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
CN 1681839	A	20051012	CN-2003-821438	20030908
US 2005288232	A1	20051229	US-2005-527062	20050309
PRIORITY APPLN. INFO.:			JP 2002-265276	A 20020911
			WO 2003-JP11420	W 20030908
OTHER SOURCE(S):		MARPAT 140:276202		
AB	1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pr myristate, lauromacrogol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.			
IT	674285-96-2P 674285-97-3P 674285-98-4P 674285-99-5P 674286-00-1P			
RL:	SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)			
	(preparation of proline esters as prodrugs for enalaprilat for percutaneous administration)			

L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RN 674285-96-2 HCAPLUS
CN L-Proline, N-([15]-1-carboxy-3-phenylpropyl)-L-alanyl-, 2-(2-hydroxyethyl)
ester (9CI) (CA INDEX NAME)

CC(=O)N[C@@H](Cc1ccccc1)C(=O)N2CC[C@H](COC(=O)OCC)S2C(=O)OCC(C1CCN(C1)C(=O)OCCOCCO)C(=O)S[C@H](Cc2ccccc2)C(=O)OCC1(C)SC(=O)N1C(=O)S[C@H](Cc2ccccc2)C(=O)O

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

=> s enalaprilat

L5 980 ENALAPRILAT

=> s 15 and prol

=> s 15 and prol?

559583 PROL?

L6 92 L5 AND PROL?

=> s 15 and 13

2 L3

L7 1 L5 AND L3

=> e ed ibib abs hitstr

E1 2 ECZYMA/BI

E2 54883 ED/BI

E3 0 --> ED IBIB ABS HITSTR/BI

E4 30 ED0/BI

E5 1 ED00/BI

E6 1 ED002/BI

E7 28 ED01/BI

E8 2 ED01S/BI

E9 1 ED02AH/BI

E10 3 ED03/BI

E11 2 ED036/BI

E12 1 ED041/BI

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10527062

Appl.

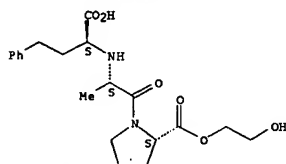
L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN
 ED Entered STN: 26 Mar 2004
 ACCESSION NUMBER: 2004:252532 HCAPLUS
 DOCUMENT NUMBER: 140:276202
 TITLE: Proline esters and preparations containing the same for percutaneous administration
 INVENTOR(S): Furuishi, Takayuki; Minami, Kunihiro; Minowa, Takayuki; Komine, Miho; Kimura, Kunihiro
 PATENT ASSIGNEE(S): Toesyo Ltd., Japan
 SOURCE: PCT Int. Appl., 38 pp.
 CODEN: PIXX02
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024754	A1	20040325	WO 2003-JP11420	20030908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TH, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2498757	A1	20040325	CA 2003-2498757	20030908
AU 2003261989	A1	20040430	AU 2003-261989	20030908
EP 1538158	A1	20050608	EP 2003-795307	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1681839	A	20051012	CN 2003-821438	20030908
US 2005288232	A1	20051229	US 2005-527062	20050309
PRIORITY APPLN. INFO.: JP 2002-265276 A 20020911				
WO 2003-JP11420 W 20030908				

OTHER SOURCE(S): MARPAT 140:276202
 AB 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline esters or pharmaceutically acceptable salts thereof are useful as a prodrug for enalaprilat, which is a medicine useful in the prevention of and treatments for, e.g., circulatory diseases such as hypertension, cardiac diseases (cardiac hypertrophy, cardiac failure, myocardial infarct, etc.), nephritis, and apoplexy. A medicine containing either of these is suitable for use as a preparation for percutaneous administration, especially an adhesive patch, from the standpoints of medicinal activity and use. For example, a composition was formulated containing 1-[N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl]-L-proline 2-hydroxyethyl ester (preparation given), iso-Pc myristate, lauromacrogol, Quintac 3421, Quintone M100, and paraffin oils and spread on a PET film to give an adhesive patch.
 IT 674285-96-2P 674285-97-3P 674285-98-4P
 674285-99-5P 674286-00-1P
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological

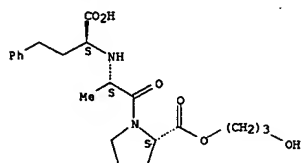
L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 study); PREP (Preparation); USES (Uses)
 (prepn. of proline esters as prodrugs for enalaprilat for percutaneous administration)
 RN 674285-96-2 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674285-97-3 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(3-hydroxypropyl) ester (9CI) (CA INDEX NAME)

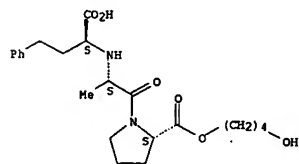
Absolute stereochemistry.



RN 674285-98-4 HCAPLUS
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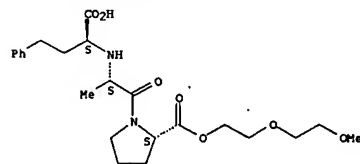
Absolute stereochemistry.

L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)



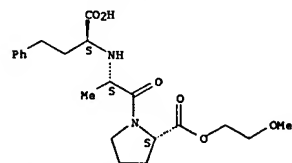
RN 674285-99-5 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-[2-(2-methoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 674286-00-1 HCAPLUS
 CN L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-, 2-(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10527062

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

28.81

201.12

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-2.34

-2.34

STN INTERNATIONAL LOGOFF AT 16:15:31 ON 23 FEB 2007